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BILL OF COMPLAINT.

IN THE

District Court of the United States

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,

Complainant,

vs.

UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, INC., and PRAGUE AMUSEMENT COMPANY, INC.,

Defendants.

In Equity No.
E12-194, on
Latham Patent
No. 707,934.

To the Honorable Judges of the District Court of the United States for the Southern District of New York.

Motion Picture Patents Company, a corporation created, organized and existing under the laws of the State of New Jersey, and a citizen of said State, plaintiff, brings this its Bill of Complaint against Universal Film Manufacturing Company, a corporation created and existing under the laws of the

Bill of Complaint.

State of New York, and a citizen of said State, and having a regular and established place of business in the City of New York, County of New York, State of New York, Universal Film Exchange of New York, Inc., a corporation created and existing under the laws of the State of New York and a citizen of said State, having a regular and established place of business in the City of New York, County of New York, and Prague Amusement Company, Inc., a corporation created and existing under the laws of the State of New York and a citizen of said State, defendants,
5 for infringement by said defendants of Letters Patent of the United States No. 707,934, dated August 26, 1902, committed in said City of New York, County of New York, State of New York, and elsewhere within this judicial district and elsewhere within said State of New York.

And thereupon your orator complains and says:

I. That prior to the 1st day of June, 1896, one Woodville Latham, a citizen of the United States, 6 then residing in the City, County and State of New York, was the original, first and sole inventor or discoverer of certain new and useful improvements in Projecting-Kinetoscopes, which were not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof or more than two years prior to his application for patent in the county hereinafter mentioned, and not in public use or on sale in the United States for more than two years prior to his said application, and not abandoned by him; and that the said

Woodville Latham did, on the first day of June, 1896, make due application in writing, according to law, to the Commissioner of Patents of the United States for the grant of letters patent therefor, and did pay into the Treasury of the United States the fees required by law, and did then and there in all respects comply with all the necessary conditions and requirements of the Statutes of the United States in such case made and provided.

II. That thereafter by certain mesne assignments in writing duly executed and delivered and duly recorded in the United States Patent Office in Liber Y-54, page 146 and Liber Y-54, page 147, the E. and H. T. Anthony & Company, a corporation organized and existing under the laws of the State of New York, acquired the entire right, title and interest to the said invention or discovery in projecting kinetoscopes, and in and to the said application for letters patent, and to any letters patent which might be granted for said invention or discovery, as by said assignment or a duly certified copy thereof here in Court to be produced will more fully and at large appear.

III. That after due examination having been made by the Commissioner of Patents as to the novelty and utility of the said invention or discovery as provided by law, letters patent of and in the name of the United States of America, under the seal of the Patent Office of the United States, signed by the Acting Commissioner of Patents and bearing date the 26th day of August, 1902, and numbered 707,934 and duly recorded according to law, were granted and issued to the said E. and H. T. Anthony & Company, its successors or assigns, where-

Bill of Complaint.

by there was secured to said E. and H. T. Anthony & Company, for the term of seventeen years from the date thereof, the exclusive right to make, use and sell the said invention or discovery throughout the United States and the territories thereof, as by reference to said letters patent No. 707,934, or a duly authenticated copy thereof, here in Court to be produced will more fully and at large appear.

- 11 IV. That by certain mesne assignments in writing, duly executed and delivered, and duly recorded in the United States Patent Office in Liber O-82, page 371, and in Liber O-82, page 372, and in Liber M-81, page 242, all the right, title and interest in and to the said invention or discovery in projecting kinetoscopes, and in and to the said letters patent therefor, including the right to sue for and collect all damages and profits theretofore accrued by reason of past infringement of the said letters patent by the manufacture, use or sale of apparatus embodying the said invention or discovery, passed to and were acquired by your orator, as by said assignment or a duly authenticated copy thereof here in Court to be produced, will more fully and at large appear, and that your orator, before the bringing of this suit, was and has ever since continued to be possessed of all of said right, title and interest.
- 12

V. That the utility of said patented invention and the validity of said letters patent have been widely recognized and acquiesced in by the public, and that your orator and its predecessors have expended great efforts and large sums of money in introducing said patented invention into practice; and that your orator and its predecessors have enjoyed, and but for the infringement hereinafter set

forth, and others similar thereto, would still be enjoying all the benefits and advantages of the said invention.

VI. That your orator and its predecessors and all persons making or vending projecting kinetoscopes under said letters patent No. 707,934, have given sufficient notice to the public that the articles made and sold by it and them under said letters patent No. 707,934 are patented by fixing thereon a label containing the word "Patented," together with the day and year said letters patent No. 707,934, were granted, and that in addition to such public notice, each of the defendants herein has been directly notified of its said infringement of said letters patent No. 707,934 and of the rights of your orator in the premises, but each of the said defendants has disregarded said notice and has continued, after such notice, to make, use and sell projecting kinetoscopes so patented by said letters patent No. 707,934, and still continues so to do.

VII. That your orator is informed and believes and therefore avers that the said defendants and each of them have well known the facts hereinbefore set forth, but contriving to injure your orator and to deprive it of the profits, benefits and advantages which might and otherwise would have accrued to your orator from the said patent, have, since the 26th day of August, 1902, and within the six years preceding the commencement of this suit, without the license of your orator and against your orator's will, and in spite of said notice and in violation of your orator's rights, jointly made, used and sold, and caused to be made, used and sold, and now continue jointly to make, use and sell and to

Bill of Complaint.

cause to be made, used and sold, within this judicial district, motion picture apparatus which embodies the invention or discovery described and claimed in your orator's said patent No. 707,934, the exclusive right to make, use and sell which is by law vested in your orator as aforesaid, and the said defendants, and each of them, in disregard of your orator's rights, have refused to pay to your orator the profits which the said defendants and each of them have made by such unlawful manufacture, use and sale, and refuse to desist from further infringement of the said patent.

VIII. That by reason of the said unlawful acts of the defendants, your orator has suffered and still suffers great and irreparable loss and injury, and has been deprived, and is being deprived of great gains and profits which it otherwise would have received and enjoyed, but which have been received and enjoyed by the said defendants; that the said defendants intend and threaten to continue such infringement and are prepared and ready so to do; and that your orator is unable to state how many machines embodying the invention described and claimed in the said letters patent No. 707,934 have been made, used and sold as aforesaid by defendants, and is unable to state the extent of the profits received and enjoyed as aforesaid by the defendants on such unlawful making, using and selling, but that your orator believes the same to have been very large and prays a discovery thereof.

IX. That forasmuch as your orator can have no adequate relief except in this Court of Equity where matters and things of this sort are properly cognizable and relievable, to the end therefore that the

defendants may account for and pay over to your orator the income thus unlawfully derived by them from the violation of the rights of your orator, and the damages due your orator in the premises, and may be restrained from any further violation of your orator's said rights, your orator prays, as follows:

(1) That each of the said defendants may be required to make, according to the best of the knowledge, information and belief of its proper officers, full, true, direct and perfect answer (but not under oath, an answer under oath being hereby expressly waived) to all matters hereinbefore stated and charged, the same as if specifically interrogated as to the same.

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(2) That your Honors may grant unto your orator a writ or writs of injunction, preliminary until the hearing of this cause and permanent thereafter, issuing out of and under the seal of this Honorable Court, directed to each of the said defendants, and strictly enjoining it and each of its clerks, attorneys, agents, servants and workmen from directly or indirectly making, using or selling any machines containing or embodying the inventions patented and secured by the beforementioned letters patent.

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(3) That upon entering a decree in favor of your orator against each of the said defendants for infringement, as above prayed for, your Honors may proceed to assess or cause to be assessed, under your direction, the damages sustained by your orator by reason of such infringement, and that your Honors may increase the actual damages so assessed to a sum equal to three times the amount

Bill of Complaint.

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of such assessment, under the circumstances of the wilful and unjust infringement committed by the said defendants in the premises; and also that the said defendants may be decreed to pay the costs of this suit; and that your orator may have such other and further relief in the premises as the nature of the case may require and to your Honors may seem meet.

And may it please your Honors to grant unto your orator the writ or writs of *subpoena ad respondendum* of the United States of America, issuing out of and under the seal of this Honorable Court, directed to the said defendants, Universal Film Manufacturing Company, Universal Film Exchange of New York, Inc., and Prague Amusement Company, Inc., commanding them, and each of them, on a day certain and under a certain penalty therein to be mentioned, to be and appear in this Honorable Court to make answer to this bill of complaint, and then and there to stand to, perform and abide by such further order, direction and decree as may be made against them.

And as in duty bound your orator will ever pray,

24

MOTION PICTURE PATENTS COMPANY,
By H. N. MARVIN,
President.

GEORGE F. SCULL,
Solicitor for Complainant.

MELVILLE CHURCH,
Counsel.

State of New York, }ss.:
County of New York, }

H. N. Marvin, being duly sworn, deposes and says that he is the president of the Motion Picture Patents Company, the complainant hereinabove named; that he has read the foregoing bill of complaint subscribed by him, and knows the contents thereof; that the same is true of his own knowledge except as to matters therein stated on information and belief, and as to those matters he verily believes it to be true; and that the reason why this verification is not made by the complainant personally is because it is a corporation.

26

H. N. MARVIN.

Subscribed and sworn to before me
this 18th day of March, 1915.

(Seal) WALTER HEARN.

27

Answer.

UNITED STATES DISTRICT COURT,

SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,

Plaintiff,

vs.

29 UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, INC., and PRAGUE AMUSEMENT COMPANY, INC.,

Defendants.

In Equity
No. 12-194.
On Latham
Patent No.
707,934.

The defendants, Universal Film Manufacturing Company, Universal Film Exchange of New York, Inc., and Prague Amusement Company, Inc., answering the bill of complaint, allege:

30 FIRST.—The defendants admit that the Motion Picture Patents Company, the plaintiff herein, is a corporation organized and existing under the laws of the State of New Jersey, and that the defendants, Universal Film Manufacturing Company, Universal Film Exchange of New York, Inc., and Prague Amusement Company, Inc., are all corporations organized and existing under the laws of the State of New York, and have regular and established places of business in the Borough of Manhattan, City of New York, in said State.

SECOND.—The defendants admit that Woodville Latham, a citizen of the United States, made application in the United States Patent Office on the 1st day of June, 1896, for United States Letters Patent; that thereafter the said application was assigned to the E. & H. T. Anthony Company, a corporation organized and existing under the laws of the State of New York, and that Letters Patent were issued to said E. & H. T. Anthony Company on the 26th day of August, 1902, No. 707,934, but the defendants deny that the said Woodville Latham was the original, first and sole inventor or discoverer of the alleged new and useful improvements in Projecting-Kinetoscopes purporting to be set forth in said application or in the said Letters Patent; and they deny that the same were not known or used by others in this country before his alleged invention or discovery thereof, deny that the same were not patented or described in any printed publication in this or any foreign country before his alleged invention or discovery thereof, or more than two years prior to his application for his said Letters Patent, deny that the same were not in public use or on sale in the United States for more than two years prior to his said application for said Letters Patent, and deny that the same were not abandoned by the said Woodville Latham. The defendants have no knowledge or information sufficient to form a belief as to whether said Latham paid into the treasury of the United States the fees required by law, and they deny, on information and belief, that the said Woodville Latham did in all respects comply with all the necessary conditions and requirements and the statutes of the United States in such case made and provided.

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THIRD.—The defendants have no knowledge or information sufficient to form a belief as to whether by certain mesne assignments in writing, or otherwise, the whole or any part of the right, title and interest in and to the said alleged invention or discovery in Projecting-Kinetoscopes, or in and to the said Letters Patent therefor, or any rights whatever in or to the said Letters Patent, or the right to recover damages or profits for the infringement of the same passed to or were acquired by the plaintiff, the said Motion Picture Patents Company. Defendants have no knowledge or information sufficient to form a belief as to whether the said plaintiff before the bringing of this suit was, or has since continued to be, possessed of all or any of the said right, title and interest in and to said Letters Patent. The defendants deny upon information and belief that the utility of the said alleged invention or the validity of said Letters Patent have been widely or at all recognized and acquiesced in by the public, and that the plaintiff and its predecessors have expended great efforts and large sums of money in introducing the said alleged invention into practice, and that the plaintiff and its predecessors have enjoyed, and but for the alleged infringement of the defendants and other infringements similar thereto, if any there be, would still be enjoying all or any of the benefits and advantages, if any there be, of the said alleged invention.

FOURTH.—The defendants have no knowledge or information sufficient to form a belief as to whether the plaintiff and its predecessors and all persons making or vending Projecting-Kinetoscopes under

said Letters Patent No. 707,934 have given sufficient or any notice to the public that the articles made and sold by it and them, purporting or claimed to be under said Letters Patent No. 707,934, are patented by fixing thereon a label containing the word "Patented" together with the day and year said Letters Patent No. 707,934 were granted. It is admitted that the plaintiff notified each of the defendants Universal Film Manufacturing Co. and Universal Film Exchange of New York that it was infringing the said Letters Patent, but the said notice was in each case insufficient and inadequate to direct the defendants or any of them to the particular acts which were claimed to be infringements of the patent and in violation of the plaintiff's rights therein. The defendants deny that they did at any time jointly make, use and sell, Projecting-Kinetoscopes embodying the inventions of said Letters Patent No. 707,934.

38

FIFTH.—The defendants deny that they have at any time or in any manner without the license of the plaintiff or in violation of its rights, jointly made, used and sold, or caused to be made, used and sold, or that they continue generally to make, use and sell, or cause to be made, used and sold, within this judicial district, or elsewhere, any motion picture apparatus which embodies the alleged invention or discovery purporting to be described and claimed in said Letters Patent No. 707,934; and they deny that the plaintiff is entitled to any profits made by the defendants, in any manner whatsoever, and they deny each and every charge of infringement and each and every of the allegations contained in the seventh paragraph of the said bill of complaint.

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SIXTH.—Defendants deny that the plaintiff has suffered, or still suffers, any loss or injury by reason of any acts of the defendants, or any of them, and deny that the plaintiff has been deprived, or is being deprived, of any gains or profits which have been received or enjoyed by the defendants or any of them; they deny that they intend or threaten to continue infringement of the said Letters Patent, or that they are prepared or ready so to do; and they deny that they have made any profits whatever to which, or to any part of which, the plaintiff is entitled.

41

SEVENTH.—Defendants allege, upon information and belief, that the said Letters Patent No. 707,934 were issued with claims of invention other than, and different and distinct from, the invention or inventions set forth and claimed in the original application for said Letters Patent and without any new or additional oath by the applicant, such as is required by the statute as a condition of the grant of Letters Patent, and for that reason the said Letters Patent were and are void.

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EIGHTH.—Defendants further answering, allege on information and belief that said Letters Patent No. 707,934 were and are invalid and void because the alleged inventions and discoveries described and claimed therein, and all the material and substantial parts thereof, had been, prior to the alleged invention and discovery thereof by said Woodville Latham, patented, described and published in the following United States and Foreign Letters Patent:

UNITED STATES LETTERS PATENT.

- No. 224,440, February 10, 1880, W. P. Kidder
 No. 433,776, August 5, 1890, David I. Eckerson
 No. 493,426, March 14, 1893, Thomas A. Edison
 No. 540,545, June 4, 1895, Robert D. Gray
 No. 569,875, October 20, 1896, M. J. H. Joly
 No. 589,168, August 31, 1897, Thomas A. Edison
 No. 666,495, January 22, 1901, Herman Casler
 No. 673,992, May 14, 1901, Thomas Armat

BRITISH PATENT.

No. 10,131 of 1889 to Greene & Evans.

FRENCH PATENTS.

- | | | |
|--------------|------------------|---------------|
| No. 208,617, | October 3, 1890, | A. M. Marey |
| No. 231,209, | June 29, 1893, | A. M. Marey |
| No. 249,875, | August 26, 1895, | M. J. H. Joly |

also in other United States and foreign Letters Patent now unknown to these defendants, but which when known they pray leave, by proper amendment, to insert in this answer. 45

NINTH.—Defendants allege, upon information and belief, that the said Letters Patent No. 707,934 were and are invalid and void, because the alleged inventions purporting to be patented and described and claimed in said Letters Patent and every material and substantial part thereof, were, prior to the supposed invention thereof by the said Latham, published and described in numerous printed publications now unknown to these defendants, but which, when ascertained, they pray leave by proper amendment to insert in this answer.

TENTH.—Defendants allege, upon information and belief, that said Letters Patent No. 707,934 were and are invalid and void, because the said Latham was not the original and first inventor or discoverer of the alleged invention or inventions purporting to be patented in and by said Letters Patent, but that the same, and every material and substantial part thereof, were, prior to the alleged invention thereof by the said Latham, invented, if there is any patentable invention described and claimed therein, by, or known to and used by, the following named persons, at the places set opposite their respective names, such persons now residing to the best of these defendants, knowledge and belief at the places respectively specified, to-wit:

Charles E. Chinnock, Brooklyn, N. Y.
 Adenor Petit, Newark, New Jersey,
 Eugene Lauste, London, England.
 (use at New York City).

and by the patentees of the foregoing United States Letters Patent set forth in the "Eighth" paragraph 48 hereof, whose residences are stated in their respective patents, at their said places of residence, and elsewhere; and by other persons whose names and residences are not at present known to these defendants, but which, when ascertained, they pray leave by proper amendment to insert in this answer.

ELEVENTH.—Defendants allege, upon information and belief, that the said Latham surreptitiously and unjustly obtained the said Letters Patent No. 707,934 for that which was in fact invented by others, if the said Letters Patent describe and claim any patentable invention, to-wit, each of the persons above-named in paragraphs

"Eighth" and "Tenth," who were using reasonable **49**
diligence in adopting and perfecting the same.

TWELFTH.—Defendants allege, upon information and belief, that the said Letters Patent No. 707,934 were and are invalid and void, because the alleged inventions purporting to be patent therein were in public use or on sale in the United States, by the persons set forth in paragraph "Tenth" hereof, and by the patentees set forth in the "Eighth" paragraph hereof at the places set opposite the names of said persons and patentees respectively in said paragraphs, for more than two years prior to any application for said Letters Patent by the said Latham, and that the said alleged invention of the said Letters Patent were abandoned to the public by the said Latham. **50**

THIRTEENTH.—Defendants allege, upon information and belief, that the said Letters Patent No. 707,934 were and are invalid and void because the invention or inventions purporting to be patented thereby did not constitute patentable novelty or invention within the meaning of the patent law, in view of the prior state of the art and in view of what was common knowledge on the part of those skilled in the art, all prior to the date of the alleged invention of the said Letters Patent by the said Latham. **51**

FOURTEENTH.—Defendants allege, upon information and belief, that said Letters Patent No. 707,934 were and are invalid and void, because for the purpose of deceiving the public the description and specification filed by said Latham in the United States Patent Office were made to contain less than the whole truth relevant to his alleged invention, or more than was necessary to produce the desired effect.

FIFTEENTH.—Defendants allege, upon information and belief, that on account of the proceedings of the said Latham in the United States Patent Office, and of the decisions of the United States Patent Office and the Court of Appeals of the District of Columbia, rendered and filed in the course of said proceedings and particularly on account of the claims and assertions by and on behalf of said Latham in a certain interference proceeding between the said Latham and Thomas Armat and the decision of the Court of Appeals of the District of Columbia in said interference in favor of said Armat and against the said Latham, in which decision said Latham acquiesced, the said Letters Patent No. 707,934 are absolutely invalid and void, and by reason thereof the plaintiff is estopped to claim that said Letters Patent cover apparatus for Projecting Moving Pictures.

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SIXTEENTH.—Defendants allege, upon information and belief, that for a long period of years subsequent to the issue of the said Letters Patent No. 707,934, Moving Picture Projecting Machines similar to those now used by defendant Prague Amusement Company, Inc., were manufactured, sold and used by many persons with the knowledge of the plaintiff's said predecessors and without any complaint on their part or assertion that said machines or mechanism infringed the said Letters Patent, and the plaintiff's said predecessors neglected to assert any alleged rights under said Letters Patent and by reason of such neglect and laches the plaintiff and its predecessors forfeited all right to now claim that any Moving Picture Projecting Machines now made, used or sold by the defendants are infringements of any of plaintiff's alleged rights under the said Letters Patent.

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and by said acts the plaintiff and its said predecessors abandoned all right to any claim of infringement of said Letters Patent and to any relief in equity therefor.

SEVENTEENTH.—Defendants allege, upon information and belief, that if the plaintiff is entitled to any redress for any acts of these defendants, it has a full, complete and adequate remedy at law, and that this Court, as a Court of Equity, has no jurisdiction.

WHEREFORE, defendants pray that the bill of complaint be dismissed with costs.

EDMUND WETMORE,
OSCAR W. JEFFERY,
WETMORE & JENNER,
Solicitors for Defendants,
34 Pine Street,
New York City.

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Amendment to Answer.

UNITED STATES DISTRICT COURT,

SOUTHERN DISTRICT OF NEW YORK.

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| MOTION PICTURE PATENTS COMPANY,
Complainant,
vs.
59 UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, INC., and PRAGUE AMUSEMENT COMPANY, INC.,
Defendants. | In Equity No. 12-194.
On Latham Patent No. 707,934. |
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On reading and filing the consent hereto annexed and, on motion of Wetmore & Jenner, solicitors for the defendants, it is

- 60 ORDERED** that the answer of the said defendants, heretofore filed herein, be and the same hereby is amended by inserting at the end of paragraph Fifth thereof, the following:

“But the defendants admit that the defendant, Prague Amusement Company, Inc., on and subsequent to December 29, 1914, at the 72nd Street Playhouse in the Borough of Manhattan, City of New York, used a motion picture projecting machine, commonly known as the ‘Simplex’ machine, containing and embodying the mechanisms and alleged inventions set forth and claimed in some of the claims of

said Patent No. 707,934, and that the said use of said machine was, as the defendants allege, under a license from the plaintiff under said Letters Patent No. 707,934."

And further by inserting after the Sixth paragraph thereof, the following:

"SIXTH-A.—Defendants further answering say that if and in the event that it shall be determined that the use of the said motion picture projecting machine by defendant, Prague Amusement Company, as stated in the Fifth paragraph of this answer as amended, was not under a license from the plaintiff under said Letters Patent No. 707,934, then and in that case the defendants allege that the said Letters Patent and each and every of the claims thereof were and are invalid and void as hereinafter alleged."

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C. M. Hough, U. S. D. J.
We hereby consent to the entry of the above order.

Dated, New York, Nov. 16, 1915.

63

GEORGE F. SCULL,
Solicitor for Complainant.

WETMORE & JENNER,
Solicitors for Defendants.

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UNITED STATES DISTRICT COURT,

SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,
Complainant,
vs.

UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM
EXCHANGE OF NEW YORK, INC.,
and PRAGUE AMUSEMENT COMPANY, INC.,

Defendants.

In Equity
12-194.

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New York, Tuesday, December 21st, 1915.

Before—Hon. CHARLES M. HOUGH, D. J.

APPEARANCES:

GEORGE F. SCULL, Esq., and MELVILLE CHURCH,
Esq., for Complainant.
MESSRS. WETMORE & JENNER, by Edmund Wetmore,
Esq., and Oscar W. Jeffery, Esq., for Defendants.

The Court: I wish to ask on the record what claims you are resting on.

Mr. Church: Claim seven.

Mr. Jeffery: Do I understand you rest your whole case on the seventh claim?

Mr. Church: Yes.

Mr. Jeffery: The bill of particulars said the first ten claims.

The Court: Let it be noted on the record that Mr. Church states that the claim of the complainant here is rested upon the seventh claim of the patent in suit.

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Mr. Church: I offer in evidence first the patent in suit.

Marked Complainant's Exhibit A.

I also offer in evidence the original acknowledged assignment from E. & H. T. Anthony & Company, to whom the patent was issued, to Anthony & Scovill Company.

Marked Complainant's Exhibit B.

Also the original acknowledged assignment from the Anthony & Scovill Company to the American Mutoscope & Biograph Company.

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Marked Complainant's Exhibit C.

Also certified copy of acknowledged assignment from the American Mutoscope & Biograph Company to the Motion Picture Patents Company.

Marked Complainant's Exhibit D.

Mr. Jeffery: The defendants have no objection to the introduction of the certified copy in lieu of the original, but we do object to that as being an agreement which has been held by the Court in Philadelphia to be an agreement in a combination and system which has been held to be in restraint of trade, contrary to the Statutes of the United States.

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Mr. Church: I will say that is a straight assignment.

The Court: Objection overruled. The Sherman law cases have not gone so far as to confiscate property.

Mr. Jeffery: Exception.

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Mr. Church: I also offer in evidence a stipulation as to the construction of the defendants' machine.

Mr. Jeffery: I will state to the Court that is the machine of only one of the defendants.

Mr. Church: The machine that is complained of at the Seventy-Second Street Play House.

Marked Complainant's Exhibit E.

I also offer in evidence the sample of the film, the reel of defendants' film, which was used on this machine.

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Marked Complainant's Exhibit F.

The Court: May it be admitted upon the record that one of the defendants had prior to the infringing act complained of, purchased, and the complainant had sold, the machine, the use of which constituted the infringement before the Court.

Mr. Church: The complainant does not sell machines at all.

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The Court: Then it may be admitted on the record that the complainant never did sell the machines the use of which constituted the infringement alleged.

Mr. Church: Yes.

The Court: Then I should like to have it shown, if not now at early convenience, what relation this complainant has, and has had, with the Precision Machine Company which, apparently, did sell the machine that is complained of. I suppose that is a part of Mr. Jeffery's case.

Mr. Church: Yes.

HARRY NORTON MARVIN, a witness called on behalf of the complainant, being first duly sworn, testifies as follows:

Direct Examination by Mr. Church

Q1. Mr. Marvin, will you please state your age, name, residence and occupation? A. Harry Norton Marvin; age, fifty-three; residence, Canastota, New York.

Q2. What has been your educational advantages and training which in your judgment qualifies you to testify as an expert on machines relating to motion pictures? A. After graduating from Syracuse University in 1893 I went into the testing department of the Edison Machine Works, in New York City, and remained there and with the Edison Lighting Company for two or three years in the capacity of expert and later for a year occupied a position of instructor in physics, mathematics and chemistry in a preparatory school at Tivoli, New York. Leaving that position I undertook the invention and development of an electric rock drill with which I was engaged for the next seven or eight years.

In 1894 my attention was directed to motion picture work and I have been identified with that work in various ways ever since.

Q3. State what, if any, has been your experience in the reading of specifications and drawings, and particularly specifications and drawings accompanying letters patent for inventions? A. I have given considerable attention to the reading of specifications and drawings. I have taken out twenty-five or thirty patents myself and for the last ten years have been very closely identified

with patent litigation in connection with the moving picture art.

Q4. Have you read and do you understand the specifications and drawings accompanying the Latham patent in suit, Exhibit A? A. I have, and I understand the specifications.

Q5. Will you please, as briefly as possible, describe so much of the mechanism disclosed in this patent as relates to the support and manipulation of the strip of perforated film that is designed to be acted upon by such mechanism? A. That part of the mechanism of the device covered by this patent to which you have referred is generally illustrated in Fig. 6 of the patent.

Referring to Fig. 6 I find here indicated a mechanism for supporting and moving a quantity of flexible film. I find that this mechanism embodies in the first place two supports for the bulk of the film, one at the top and the other at the bottom of the machine. The support at the bottom of the machine being a fixed support, marked 23, and being intended to carry the bulk of the film before it has passed through the machine.

By the Court:

Q6. On the spool 22? A. On the spool 22.

The film is finally wound up on the frictional driven support 25 after passing through the machine. After leaving the main support the film passes around a roller 54 and then around a rotary-toothed feed wheel 39 which runs continuously and draws film off from the supply reel and delivers it into the loop 21a. From this loop the film passes around a roller 55 through an exposure window 56 over another rotating toothed wheel

which is arranged to rotate with an intermittent movement, numbered 50. This wheel by its intermittent movement intermittently draws the film from the loop 21a and delivers it into the loop 21b.

From the loop 21b the film passes around the roller 46 which is a toothed-rotary feeding device which runs constantly. It constantly takes up the film from the loop 21b and delivers it to the take-up reel mounted on the frictional support 25.

The operation of the machine then is that the two continuously running toothed feed rollers 39 and 46 constantly produce slack film and take it up respectively.

Q7. They run at the same rate of rotation? A. They run at the same rate of rotation, and are the same diameter.

Between those two continuously running rotary feed devices there is always a slack portion of film. That slack portion of film is acted upon intermittently by the rotary-toothed roller 50. All of these toothed rollers have teeth that engage holes made in the edges of the film.

The existence of the loop 21a enables the intermittently actuated wheel 50 to take up first enough for one picture and then enough for another with a minimum of friction and possible tear.

Q8. If the loop were not formed there the toothed wheel 50 would pull against the toothed wheel 39 and that would be injurious to the film? A. Yes, or if the toothed wheel 39 were not there and the intermittent wheel pulled directly off from the reel, it would tend to tear it. The function of the loop is to relieve all strain on the film incident to the intermittent action.

Q9. What is indicated by 34a? A. That is an eccentric bearing in which is mounted the shaft of a part of the Geneva movement which may be seen

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in Fig. 4. The Geneva movement consists of two drums or broken gears that work together.

Q10. Then it is the eccentricity of that shaft which is the source of the intermittent movement?

A. No. The intermittent movement is accomplished, if you will look at Fig. 4—here is a broken gear, there is a flat part there (indicating).

It is also shown in Fig. 5 better. You see, as the wheel 47 revolves once during every revolution those few teeth engage the teeth in the drum 48. Now, that little 34a is a little eccentric bearing that is put in there so as to take up wear by bringing those surfaces closely together (indicating).

Q11. What is the effect of the maintenance of that loop of film, or slack portion of film between the two continuously rotating toothed feed wheels?

A. The effect of that is to provide a very small quantity of free film for the intermittent device to act upon so that the action of the intermittent device and the strain on the film is no greater than if the film were only a few inches in length, that is, a distance substantially equivalent to the distance between those two continuously feeding devices.

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It being necessary to handle long quantities of film, ordinarily one thousand feet, it is necessary to have something of that sort to relieve the strain, because if you attempt to start the film, or stop it suddenly, the strain upon the little holes would be so great as to tear them.

The function of that slack part of the film is to relieve the film of all strain.

By Mr. Church:

Q12. Is the operation of the mechanism you have described affected by the circumstance that the thing acted upon, the film, the perforated film, is

to be used for taking photographs or for projecting photographs? A. As I understand this device the purposes to which that film may be put in the course of this intermittent movement is entirely immaterial.

It is obvious that when the film is stationary at the exposure window you may use it for any purpose you like, either for photographing upon it, or for throwing light upon it to project the picture that may have been printed there.

The operation of the mechanism for moving that film with an intermittent movement without straining it would be the same in any case.

Q13. That is to say, whether it was plain film with pictures or without pictures? A. Yes, it might have pictures on it, it might have pictures painted on it, or etched. It would not at all affect the operation of this piece of mechanism.

Q14. And the special use of this mechanism is indicated in the patent itself? A. The use to which the patentee indicates this mechanism is to be put is that of projecting upon a screen a series of pictures printed upon a flexible strip, for the purpose of making a motion picture exhibition.

The Court: I think I understand that as far as the witness has gone.

Q15. State whether or not you are familiar with the construction and operation of the machine that is pictured in Complainant's Exhibit E? (Witness examines exhibit.) A. I am.

Q16. Do you recognize from the structure shown in the picture the character of the machine, the name of it? A. I recognize these drawings as being drawings of the structure of a motion picture projecting machine known as the Simplex.

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Harry Norton Marvin.

Q17. Will you please very briefly and in the same manner that you did describe the machine of the complainant's patent, describe the machine pictured in those drawings—

By the Court:

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Q18. Let me ask you a question. Does not this Complainant's Exhibit Simplex machine marked Complainant's Exhibit E purport to diagrammatically represent a machine with the same lettering and numbering as in the patent in suit, Fig. 6? A. Fig. 1 of Complainant's Exhibit E appears to correspond to Fig. 6 of the patent in suit, and I notice that the principal parts of the two mechanisms are numbered with identical numbers.

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Q19. Now, kindly follow through the Simplex machine, if you will, substantially as you did Fig. 6 of the patent? A. I will direct your attention to the fact that in the patent in suit it is intended that the film should be moved upwards, but in the Complainant's Exhibit E the film is intended to be moved downward. That is the only substantial difference.

Q20. Proceed? A. Comparing, we find that the support of the supply reel of the defendants' machine indicated by 23, compares with the support in the patent in suit 23 found at the bottom of the machine.

Conversely, the take-up reel, which is frictionally driven in each machine, is found in Defendants' machine at the bottom of the machine which is numbered 25.

Q21. As in Fig. 6 of the patent? A. As in Fig. 6 of the patent.

Q22. Show the part of the film and the actuation thereof with particular reference to the loop of

slack? A. The film starts from the reel on the support 23 and passes in the defendants' machine downward around the rotary-toothed feed wheel 39.

Q23. Having previously passed the idler 54? A. Having previously passed the idler 54. This rotary-toothed feed wheel 39 draws the film from the upper supply, or magazine, and delivers it into the loop 21a. From the loop it passes down through the exposure opening, or window, and around the rotary-toothed intermittently acting wheel 50, in each drawing. This intermittent toothed wheel delivers the film into the loop 21b, identical in both drawings.

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The film passes around the continuously running toothed rotary feed wheel 46 and from there it passes down around the idler 56 onto the take-up reel 24, mounted on the frictionally driven support 25.

The Court: Mr. Jeffery, is it denied that the seventh claim of the patent in suit reads upon the Simplex machine?

Mr. Jeffery: No, sir, I do not think so, 93 with one possible exception, I do not think, so far as the language of the claim is concerned.

By Mr. Church:

Q24. Will you state whether or not in the construction of the machine shown in the Complainant's patent the two continuously rotating toothed wheels are positively driven? A. They are.

Q25. Is that also true of the defendants' machine? A. That is also true of the defendants'

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machine, and they are independent of the support for the film.

Q26. And may I also ask whether or not all of the feeding wheels, the continuously operating feed wheels and intermittently operated wheels are adapted to act upon equally spaced holes in the film? A. They are, in both cases.

Q27. Please examine the reel of film marked Complainant's Exhibit F and state whether or not that film corresponds to or differs from the character of film set forth in the patent in suit? (Witness examines film.) A. This film corresponds in characteristics to the film referred to in the patent in suit as being the film intended for use in the machine, having equally spaced holes along its edges and being flexible.

Q28. For the purpose of completing the record will you give a little more extensive description of that film, because it may be lost. Just describe it very briefly? A. This film is a flexible transparent, or translucent film having equally spaced perforations along its edges and having upon it a series of sharply defined equi-distant photographs of different phases of a moving object as observed from a single point of view. It is of very considerable length, apparently, I should say, in the neighborhood of one thousand feet.

Q29. What is the width of that film, and how many perforations are there to a picture? A. This appears to be a film of the standard width, which I know to be one and three-eighth inches. The width of the picture itself is one inch, the height of the picture being three-quarters of an inch, and there are four perforations for each picture on each side.

Cross Examination by Mr. Jeffery:

XQ30. You are an officer of the Motion Picture Patents Company? A. Yes.

XQ31. What officer? A. I am president.

XQ32. How long have you been president? A. I have been president for three or four years, I think. I do not remember.

XQ33. How long have you been an officer of that Company altogether? A. I have been an officer of that Company since its organization, in 1908.

XQ24a. This film that you were just shown, Exhibit F, is that a film which is used generally in motion picture exhibiting machines, that is, a film of that nature and style with holes in it as you have described? A. Yes.

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XQ25a. How long has that been the case? A. That has been the case ever since exhibiting machines came into vogue.

XQ26a. And that film is covered by a patent, or was covered by a patent?

Mr. Church: Is this proper cross-examination?

The Court: I do not see it, Mr. Jeffery.

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Mr. Jeffery: Well, possibly not. We want Mr. Marvin here tomorrow morning then, because we will have to ask him some questions.

The Court: If you tell me that you consider this germane to some, or any, part of your affirmative defense.

Mr. Jeffery: Yes, I do.

The Court: As the question is merely one of the order of proofs you may go on, it being understood that you make the witness your own.

Mr. Jeffery: Yes.

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Harry Norton Marvin.

XQ27a. Is that film made in accordance with the Edison re-issue patent No. 12,192?

Mr. Church: If your Honor please, that is a question of law.

The Court: No, that is a question of fact.

A. I presume from my observation that that film corresponds to the description given in the Edison re-issue patent.

101 XQ28a. And that patent expired when? A. That patent expired on the 31st day of August, 1914.

XQ29a. I show you a Simplex machine which bears the name plate of the Precision Machine Company and which bears a notice plate on which is "Manufacturer's Serial No. 3556, and special license 3667." Will you look at that machine and say whether or not that is a machine which contains the mechanism which you have described as being in the Latham patent in suit?

Mr. Church: I object to that as not proper cross-examination.

102 The Court: It is admitted it is not proper cross-examination. I have said and stick to it that if Mr. Jeffery tells me that it is germane to some of his defense he can go ahead in the interest of speed and make the witness his own.

Mr. Church: All right, if that is the case.

A. Is this a regular standard machine?

XQ30a. It is a regular standard Simplex machine? A. Well, a part of the mechanism is contained here, but I do not see any supports for the film.

XQ31a. If the film feed reel and the take-up reel were on that machine, would it then embody the

mechanism which you have described as being the subject of the Latham patent in suit? A. I should say if it had the customary supports for the film that go with the ordinary Simplex machine, as it is commonly known, it would.

XQ32a. This machine contains a place on the top for the reception of the film magazine, does it not?

A. Yes, I assume so.

XQ33a. You will notice that this machine bears a license plate on it, do you not, from which I read those numbers? A. Yes, a sort of plate; I do not know whether you would call it a license plate or not.

XQ34. Well, for convenience sake I will show you a copy, what I will state to you is a correct copy, of the license notice on there and ask you if that machine bears a plate indicating that it is a license under the Latham patent in suit No. 707,934 and other patents belonging to the Motion Picture Patents Company which are on that plate enumerated? A. I do not wish to be finicky about this matter but I do not want to say anything here that I do not mean. I do not see that this statement on this plate gives a license for that machine.

By the Court:

XQ35. Are you able to state whether or not the form of words just before you, whatever the meaning of them may be, is inscribed upon, or fastened to, each Simplex machine? A. Yes, this is the wording of the plates commonly put upon the Simplex machine.

XQ36. And is it true that the patents there enumerated, not only the patent in suit, but other patents enumerated, do belong to the complain-

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Harry Norton Marvin.

ant's company of which you are president? A. Yes, sir.

By Mr. Wetmore:

XQ37. Mr. Marvin, your company granted a written license to the Simplex Company, did it not? A. We granted a written license to the Precision Company, the company that manufactures the Simplex machine.

107 By the Court:

Q38. The name of that company is, I think the Precision Company; is that correct? A. I believe that is correct.

By Mr. Wetmore:

XQ39. And your company caused to be placed on that machine the license plate that has been referred to? A. Well, a provision of the license to the Precision Machine Company calls for placing such a plate.

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XQ40. And your company furnished the wording of the plate? A. We did.

XQ41. And that went out on the market with that plate on it? A. I assume that it did.

XQ42. And these machines which you had are intended to be used with the film which you have identified? A. A film of that character?

XQ43. Yes, exactly of that character? A. Yes.

XQ44. And those films of that character are practically universally used with the projecting machines in the motion picture business? A. Yes.

XQ45. And have been so since the time you men-

tioned? A. Well, they have been sold and leased since the expiration of the patent.

XQ46. And before that time also? A. Before the expiration of the patent.

XQ47. Well, since the expiration of the patent they have been used universally in these machines? A. Yes.

Mr. Jeffery: I ask that the copy of the notice on the machine which was identified by the witness be marked for identification.

Marked Defendants' Exhibit 1 for identification.

By Mr. Jeffery:

XQ48. I show you an agreement which has been produced by the complainant's counsel in this case and which bears date June 20th, 1912, and which purports to be between the Motion Picture Patents Company and the Precision Machine Company, Incorporated, and ask you if that agreement was made between those two companies, and if you signed it? A. That is such an agreement.

Mr. Jeffery: I offer in evidence that agreement and ask that a copy be marked in place of the original, at the request of the complainant's counsel.

Marked Defendants' Exhibit 2.

Mr. Jeffery: I understand that it is admitted by my friends on the other side that the machines which were used by the Prague Amusement Company, and the use of which is said to constitute part of the infringement in this case, were manufactured and sold by the Precision Machine Company by

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Harry Norton Marvin.

virtue and under authority of this license agreement.

Mr. Church: That is correct.

Mr. Jeffery: I would like also to ask my brothers on the other side whether they will now admit that the two pictures named "The Five Pound Note," and "The Refugee" were made subsequent to the expiration of the Edison patent No. 12,192.

Mr. Church: I do not know that.

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Mr. Jeffery: Mr. Scull knows that.

Mr. Church: It is a fact, and I admit it.

By Mr. Jeffery:

XQ49. You said that the feeding devices on this machine as shown on the drawings which you have before you were positively driven. What did you mean by that? A. I mean that they are connected, all of them, with the main driving shaft of the machine in such a way as to insure positive movement of the feeding devices when the main crank is operated.

114 XQ50. That is, they are driven directly from the main crank? A. Through the positive gearing.

XQ51. Directly connected with the main shaft? A. Through positive gearing so that if we stop one of those it would stop the main drive unless there was some slippage.

XQ52. Why was an intermittent feed used on that machine as shown in the patent in suit? A. Why was an intermittent feed used in the Latham machine?

XQ53. What is the purpose of the intermittent movement as shown in the Latham patent in suit? A. Well, the purpose of the intermittent move-

ment appears to be to permit the intervals of rest of the film during which pictures of the stationary film may be projected.

XQ54. And during which light is thrown upon the screen? A. Yes. Light is supposed to be thrown on it in order to make it project. If you had no light it would not project although you may use the machine then for a direct view.

XQ55. And that period of rest is greater than the period of movement of the film as drawn by the intermittent, is it not? A. The intermittent indicated in the patent here is calculated to produce a movement in which the period of pause exceeds the period of movement.

XQ56. And you had to have that intermittent so as to get a period of rest of the film? A. That was the intent of it.

XQ57. And in order to prevent that jerk which the intermittent would cause directly on the film coming off the reel, the loop was provided, is that correct? A. Well, it had several functions. It not only avoided the jerk at the start when you started the film, but it prevented it having any jerk at any time during movement. It was to avoid strain on the film and to create there a condition similar to what you would have if you were operating on a few inches of film only.

Mr. Jeffery: I offer this machine in evidence, the Simplex machine, used by the Prague Amusement Company which has been referred to by the witness and shown to him.

Marked Defendants' Exhibit 3.

XQ58. On Exhibit 3, being the Simplex machine made by the Precision Machine Company, is there

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a device known as the framing device? A. There appears to be a device for accomplishing the purpose of a framing device. I suppose you could call it properly so. It is for the purpose of bringing the picture into proper register with the exposure opening.

XQ59. Is such a device as that common on all moving picture projecting machines? A. All projecting machines in common use have equivalent devices; that is, devices for accomplishing the purpose, whether by equivalent mechanism or not I cannot say.

XQ60. You mentioned the object of the framing device on this Simplex machine? A. Yes.

XQ61. My question is whether the other projecting machines which are on the market all embody a framing device of one kind or another, but for the same purpose which you have just described? A. Yes.

XQ62. Mr. Marvin, a suit was brought against the Motion Picture Patents Company by the Government of the United States in the Eastern District of Pennsylvania under the anti-trust laws, was there not? A. There was.

XQ63. And a bill of complaint was filed by the Government, was it not? A. It was.

XQ64. And an answer was filed by the Motion Picture Patents Company? A. Yes.

XQ65. And did you sign the answer on behalf of the Motion Picture Patents Company? A. I may have, I do not remember.

Mr. Jeffery: I wish to say that this is strictly cross-examination. This is not part of my case.

Mr. Church: Well, it is part of your case just the same.

Mr. Jeffery: I mean it is not part of my affirmative defense.

Mr. Church: Well, he is your witness still.

The Court: I think Mr. Jeffery is right about that, if I see what he is driving at.

Mr. Church: Well, perhaps I do not see it.

XQ66. You say you signed the answer? A. I 122 may have. I do not know whether I did or not.

XQ67. Have you seen printed copies of that answer? A. Yes.

XQ68. I show you a printed copy which bears the imprint of C. G. Burgoyne as printer and ask you whether that is a copy of the answer that is filed by your company and which you signed in that suit? A. Yes, that appears to be a copy.

XQ69. You read that answer before you signed it? A. Yes.

XQ70. Do you remember that you there stated, "The gist of the invention made by Latham consisted in providing a device for feeding the film regularly and continuously so that a predetermined loop of slack was formed and maintained"? A. I did so state.

XQ71. And that stated the contention of the Motion Picture Patents Company as to the nature of the Latham invention, did it not? A. Well, in general terms. It did not specify it particularly.

XQ72. Did you state further, "The intermittent sprocket feeding device operated on this loop of slack film which was freely moved and hence there was no likelihood of the teeth of the intermittent

sprocket wheel tearing or straining the film"? A. Yes, I suppose I said that.

XQ73. Did you further state, "The predetermined loop is incident in both a camera and in a projecting machine"? A. I presume I did. If it is there I did.

XQ74. Were you present at the argument of that case? A. I was.

XQ75. Did you hear Mr. Church's argument? A. I did.

125 XQ76. Do you recall that it was afterwards printed? A. Yes.

XQ77. Have you read it since it was printed? A. I have glanced through it.

XQ78. Do you remember that Mr. Church said this in that argument as printed here—

The Court: Mr. Jeffery, I shall rise in rebellion in trying to make a client responsible for everything that his counsel says.

(Discussion off the record.)

Mr. Jeffery: I withdraw the question.

126 XQ79. I understood you to say in your direct examination that this patent is intended to cover both the camera and the projector; is that correct? A. I do not think I said that.

XQ80. Just what was it you meant to convey?

Mr. Church: He did not say that.

The Court: I do not see that it is material what he did say, and I am inclined to so hold. If you can show any materiality, show it to me.

Mr. Jeffery: I may have misunderstood him, but I simply wanted to bring out that

if that was his contention I wanted to make sure that their contention is contrary to that of Judge Hand and the Circuit Court of Appeals.

The Court: That is a matter of argument and not evidence.

XQ81. Were you connected with the Biograph Company at any time? A. I was, ever since it was organized.

XQ82. Did that company use the mechanisms which were shown in the Casler patent which was in interference with Armat and Latham? A. Yes, I remember that somewhat indistinctly, that mechanism, but fairly well I think. Perhaps well enough for your purposes.

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XQ83. In that machine was there a friction feed, or a sprocket feed? A. A friction feed.

XQ84. And in that machine did that friction feed pull the film from the film reel? A. Yes, there was a pair of rollers, as I remember it, that pulled the film out.

XQ85. In Fig. 4 of drawings attached to the stipulation which is marked Complainant's Exhibit E there is shown a shutter. Will you be good enough to compare that drawing with the shutter on this machine, Defendants' Exhibit 3, and say if they are the same, and if not, what differences there are? A. Well, they seem to be substantially the same. I have not measured up exactly the openings there, but I do not know that that is material. It is substantially the same type of shutter.

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XQ86. You cannot say whether the openings are the same? A. Well, I cannot measure them, but I assume they are.

XQ87. Is it not a fact that you can tell by examination of this that these holes are of different

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sizes? A. I can tell that. I say I cannot tell whether there is exactly the same number of degrees covered by the opening.

XQ88. But the holes on the shutter Exhibit 3 are all different in size, are they not? A. Well, I assume there is one blade a little wider and two blades a little narrower.

Mr. Jeffery: I understand Mr. Scull says he will concede there is a difference in the openings.

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Mr. Scull: And that difference is that one opening is 42, the other 46, and the other 47 degrees?

The Court: Those are the shutter openings?

Mr. Scull: Yes, your Honor.

The Court: The degrees are in the circumference of a circular shutter?

Mr. Scull: Yes.

By Mr. Jeffery:

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XQ89. As I understand you, the Latham patent in suit contemplates a greater period of rest and illumination than of movement of the film, does it not? A. Well, I do not know as that is an essential feature of the invention.

XQ90. Will you please look at the drawings and state whether or not in your opinion that patent shows and contemplates a greater period of rest and illumination than of movement of the film? A. Well, I should say that the drawing of the structure indicated in the patent as illustrative of the invention indicates that the period of pause would be greater than the period of movement, if they use gears in the proportion shown in the drawing.

XQ91. Just refer to page 4 of the patent, lines 104 to 110. That states, does it not,

"The shutter 31, carried by the shaft 28, has
"but a small solid section. Its use is to cover
"the film during the interval of movement of
"each picture"?

A. Yes, that is right.

XQ92. Does not that indicate that the period of rest and illumination is greater than that of the movement? A. Well, in these devices that are shown here, yes.

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XQ93. And the period of illumination is greater than the period of darkness, is it not? A. Yes.

XQ94. You described in your direct examination that the intermittent movement of the film is caused by this intermittent sprocket. In the Edison camera patent, which was owned by your Company, that film is moved past the exposure opening, past the lens, by an intermittent sprocket, is it not? A. Yes.

XQ95. And it is done in such manner that they take about 46 pictures a second, do they not? A. Well, I do not know that there is anything to indicate the number that they take, or that that has any relation to the period of movement. I think Edison in his patent somewhere refers to taking pictures at over 40 a second, but I do not think it is common to take them at that rate.

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XQ96. Mr. Marvin, do you remember that the petition in the Government suit had annexed to it a number of license and other agreements made by the Motion Picture Patents Company with other concerns, and that they were alleged by the Government to be agreements in restraint of trade? A. Yes, there were quite a number of them there.

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XQ97. And among them was an agreement which was a specimen of the agreement with the projector manufacturers, was it not? A. Yes.

XQ98. And that was a specimen of the agreements of which this agreement with the Precision Machine Company which has been offered in evidence, was one? A. Well, substantially. I think there were some little modifications in that Precision agreement, but it was substantially the same, I think.

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XQ99. Now, it was pursuant to that agreement that this plate on the Precision machine with the license restriction upon it was placed there, was it not? A. Well, it was pursuant to that agreement, I think, that the plate was placed there independent of what is on it.

XQ100. Now, Judge Dickinson decided that case, did he not, in October? A. I believe he did.

The Court: What is the relevancy of that?

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Mr. Jeffery: I want to get into the record that that very notice which is part of that agreement is one of the things which Judge Dickinson there in that suit has held to be a violation of the law, has held the agreement itself to be invalid. No decree has yet been entered upon that, but I want to make it clear on this record that this suit is an attempt to enforce an agreement, an arrangement, which has been held by another Court to be contrary to the rule—

Mr. Church: I would like to ask counsel if he claims under that agreement. Does the defendant here claim under that license agreement?

Mr. Jeffery: We claim that we have a license by reason of the fact that that machine was manufactured under a license.

Mr. Church: You claim under that agreement?

Mr. Jeffery: Your Honor will understand that this machine was not purchased direct from the Precision Company by our client. This machine came into our client's hands second or third hand, and their right to use it is a right dependent upon the right of every man who buys a machine that is stamped "Licensed."

The Court: Well, I will think about it over night.

Discussion off the record.

Adjourned to to-morrow, December 22, 1915, at 10:30 A. M.

New York, December 22, 1915, 10:30 A. M.

Trial resumed.

Mr. Wetmore: I offer in evidence a certified copy of Judge Dickinson's opinion.

Mr. Church: I object to it as incompetent, immaterial and irrelevant.

The Court: Let it be marked.

Marked Defendants' Exhibit 4.

HARRY NORTON MARVIN, resumes the stand.

Cross Examination by Mr. Jeffery (continued):

XQ101. Mr. Marvin, were the Biograph machines which were spoken of yesterday sold by the Bio-

graph Company? I understood the name of the company that manufactured those machines was the Biograph Company, or some name of that kind?

A. The first name of the company was the American Mutascope Company. The name was then changed later to the American Mutascope & Biograph Company and subsequently changed again to the Biograph Company. The identity of the company was not changed.

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XQ102. And the machines were known as the Biograph? A. The Biograph Company never sold any machines.

XQ103. What was the name of the machines which incorporated the Casler friction feed which we spoke of yesterday? A. I think no machines were ever made and put to use involving the construction shown in the application that was in interference.

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XQ104. There were no machines sold with the Casler friction feed in them, or with a friction feed? A. No machines of any kind were sold by the Biograph Company, but the Biograph Company subsequently used a machine with a friction feed but of a different construction from the one shown in that application.

XQ105. Did it use more than one machine with a friction feed? A. It used a number of machines with the friction feed.

XQ106. That is the friction feed for drawing the film off the wheel? A. Yes.

XQ107. From which it was fed to the intermittent? A. Yes.

XQ108. Those machines were in use for sometime? A. The Biograph Company used a number of those machines in giving exhibitions itself.

XQ109. And those exhibitions were successful exhibitions? A. They were quite successful.

XQ110. Now, Mr. Marvin, what is the object of the teeth on the continuous feeding devices 39 and 46 in those drawings of the Latham patent? A. The function of the teeth on those two rollers is to engage equally spaced holes made in the edges of the film, the purpose of that engagement being to advance the film positively and regularly without the possibility of slippage and to advance the film not by linear measurement of the film but by measurement per hole, so to speak. The revolution of the wheel always advances a certain number of holes per revolution of the wheel independent of the exact pitch of those holes, as might be influenced by shrinkage of the film.

XQ111. What is the purpose of the teeth on the intermittent device 50 on the drawings of the Latham patent? A. The purpose of the teeth on the intermittent wheel marked 50 is substantially the same as that of the purpose of the teeth on the two other rollers I mentioned.

XQ112. That is, on the continuous feeding devices 39 and 46? A. Yes, 39 and 46.

XQ113. Mr. Marvin, what part of the film used in this projecting machine in which the Latham mechanism is used wears out the quickest? A. What part of the film?

XQ114. Yes. A. Well, that depends upon a number of factors. If the sprocket teeth did not fit the perforations, if the tensions in the machine are adjusted too tightly, if the sprocket teeth become badly worn, then the holes in the film, or the little bridges between the holes may become worn out before the rest of the film is defaced. But on the contrary if the film is run upon a machine that is well adjusted and in good condition, then the back of the film may become scratched and worn

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and defaced so as to produce a very bad spectacle before the perforations are destroyed.

XQ115. But in your experience, in actual practice, which part of the film wears out first, in the majority of cases? A. In the majority of cases, the emulsion surface becomes worn out before the perforations become destroyed.

XQ116. Now, Mr. Marvin, you remember that your company brought suit for infringement of the Edison reissue patent No. 12,192 in the Supreme Court of the District of Columbia? A. Yes.

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XQ117. And that case went to the Court of Appeals of the District of Columbia, did it not? A. It did.

XQ118. And the Court of Appeals of the District of Columbia held that Claim 2 of that patent, which was the preferred claim, was invalid, did it not? A. Well, I do not remember the number of the claim, but I believe that the Court held that the part of the patent that we sued upon was invalid.

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XQ119. In what year was that, if you remember? A. I do not remember the year. I think it was about 1912.

XQ120. It was 1912 or 1913? A. Somewhere along there, I cannot exactly remember.

Re-direct Examination by Mr. Church:

RDQ121. Mr. Marvin, the license from the complainant, the Patents Company—I will use that short phrase to save time—to the Precision Machine Company which has been offered in evidence for the defendants as Defendants' Exhibit 2 authorizes the sale of the patented projecting machine by the Precision Company for the use of the purchaser under at least two specific restric-

tions upon the purchaser respecting use, does it not? That is to say, first, that the machine be used by the purchaser only with moving pictures leased by a licensee of the Patents Company as the owner of the projecting machine and film patents, and, secondly, that the purchaser comply with the other terms as to use to be fixed by the Patents Company. Do I understand the matter correctly? A. Yes.

Mr. Jeffery: I object to that. The agreement speaks for itself.

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The Court: Let the answer stand, but I think the question and the answer is plainly open to the objection made.

RDQ122. And in that agreement referred to there is a stipulation that the notice which I have spoken of, or that the condition of which I have spoken, shall be applied to the name-plate on this machine?

Mr. Jeffery: Same objection.

The Court: Objection sustained.

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RDQ123. The machine that has been offered here in evidence as Defendants' Exhibit 3 you have testified has upon it the name-plate containing this notice of restriction; is that the fact? A. I have.

RDQ124. It was admitted here yesterday by counsel for the defendants that the Complainant's Exhibit F is a reel of motion picture film known as the "Five Pound Note," that it was used by the defendant, the Prague Amusement Company, at its 72nd Street playhouse, that it is the Simplex machine offered in evidence here, and that that

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reel of film was made by the defendant, the Universal Film Manufacturing Company, and sold by that defendant to the defendant, the Universal Film Exchange, and furnished by the Universal Film Exchange to the Prague Amusement Company for use on its Simplex machines. I will ask you whether the Universal Film Manufacturing Company, or the Universal Film Exchange, was, or is, a licensee of the Patents Company under its patents on projecting machines and films?

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Mr. Jeffery: I object to that as incompetent, immaterial and irrelevant.

The Court: I will permit him to answer; objection overruled.

A. Neither the Universal Film Manufacturing Company nor the Universal Film Exchange was or is a licensee of the Motion Picture Patents Company under any of its patents.

RDQ125. Was either the Universal Film Exchange or the Universal Film Manufacturing Company authorized to furnish that film, or any films, for use upon this particular Simplex machine, or any other Simplex machine, bearing a plate similar to the one affixed to the Simplex machine in evidence?

Mr. Jeffery: Same objection.

The Court: I will allow him to answer it.

Mr. Jeffery: Exception.

A. Neither of those concerns was authorized by the Motion Picture Patents Company to supply any film for use on any such machines.

RDQ126. Is the Prague Amusement Company,

the defendant here, regarded by the Patents Company as a licensee under this patent?

Mr. Jeffery: I object to that.

The Court: Objection sustained. You may ask him whether it is a licensee.

Mr. Church: I withdraw the question.

RDQ127. Is the Prague Amusement Company a licensee?

Mr. Jeffery: I object to that unless he states what he means by that. 158

Mr. Church: Under the projecting machine patents of the Patents Company.

Mr. Jeffery: I object to that as incompetent, immaterial and irrelevant.

Objection overruled; exception.

A. It was not.

RDQ128. Did the defendant, the Prague Amusement Company, ever apply to the Patents Company for terms upon which it might use the Simplex machine in its possession made by the Precision Machine Company? 159

Mr. Jeffery: I object to that as irrelevant and immaterial.

Objection overruled; exception.

A. It did not.

RDQ129. Did the defendant, the Prague Amusement Company, or any of its officers to your knowledge, or information, have knowledge of the terms upon which the Patents Company was accustomed to grant permission to use a machine put out by one of its licensed manufacturers?

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Mr. Jeffery: I object to that as irrelevant and immaterial.

The Court: Objection sustained. The presumption is that the Precision Machine Company observed the terms of the contract, and that is as far as you are called upon to go at the present time.

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RDQ130. Did the Patents Company, or any of its officers, ever bring home to any officer of the Prague Amusement Company a knowledge of the conditions under which the Patents Company was accustomed to grant licenses when application was made for the right to use licensed machines?

Mr. Jeffery: I object to that as incompetent and irrelevant.

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The Court: Objection sustained. The reason why I sustain that objection is that I apprehend that the question here is whether the Prague Amusement Company could not do exactly what it is accused of having done, no matter how many conversations it had with the Patents Company, or any of its affiliated concerns, and that question I understand does not need that query to illuminate it.

Mr. Church: I may state to the Court that my object in asking the question was to show that the terms mentioned on the notice plates under which a licensed machine might be used were well-known to the Prague Amusement Company, and that they had been notified of that fact, as to the terms.

The Court: Well, assume that they knew all about it, because the presumption, I

think, is that a man can read and that the officers of the Corporation can read, being men. The question is was it lawful. That is the whole point.

RDQ131. The plate says that the machine can only be used upon terms imposed by the Patents Company? A. Yes.

Mr. Church: Now, the object of this question is to show what those terms were. The plate does not say what they were. Also that the terms were known to the defendant.

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The Court: I might as well meet the question of law which I am prepared to meet and which I think is most clearly presented by this case as outlined. It does not make any difference whether they were known or not, as a matter of fact. If that notice is good for anything, it is plainly printed in the English language, anybody can read it, and if anybody is bound by it, it does not make any difference how many conversations there were about it, or how many times the matter was explained and expounded to the individuals who had in common parlance purchased the Simplex machine. That is the view that I entertain about this and I shall now adhere to it.

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RDQ132. Was any officer of the Prague Amusement Company ever a licensee under the Patents Company's patents?

Mr. Jeffery: I object to that as immaterial and irrelevant.

The Court: Objection sustained. The Prague Amusement Company has not endeavored to show that it had any license in that sense of the word; that is, a contractual license. You are not obliged, and I do not think you ought to be permitted, to show this until some effort is made to show the other.

Mr. Church: May I have the record show that I except to the rulings on this set of questions?

The Court: Yes.

RDQ133. State what was the underlying policy of the Patents Company in this licensing scheme that is set forth in this agreement?

Mr. Jeffery: I object to that.

The Court: Objection sustained. The underlying policy, so far as it affects the users of the Simplex machine, is sufficiently explained by the plate. The only question is whether, however upright and virtuous the motives may be, that scheme as outlined in the notice was a lawful scheme. Therefore the motive is not necessary for that.

Mr. Church: Exception.

RDQ134. Before the beginning of this suit were notices of infringement sent to the several defendants advising them of their infringement. I mean to the Universal Film Manufacturing Company, the Universal Film Exchange and the Prague Amusement Company?

Mr. Jeffery: I make the preliminary objection that I think that the notices them-

selves should be produced so that we can see what the notices actually were.

The Court: Well, I think that is a fair objection technically, but I do not see that it is of any importance. If any notice of license is necessary what plainer notice could there be than this plate upon the machine?

Mr. Church: Your Honor will recall that under the patent statutes we are required to give notice of infringement if we are to recover damages.

The Court: But if I recollect right, I speak under correction, that does not affect the right of injunction for the future.

Mr. Church: No, not necessarily, but it does cover the right to recover damages, so it is customary in these cases to give notice of infringement and I am asking him as to whether any notice of infringement was given.

The Court: He may answer that question subject to correction by the introduction of any written documents hereafter, if there be any.

A. Such notices were sent.

RDQ135. Please examine the papers that I show you dated March 3rd, 1915, one of them, and the other two dated January 18th, 1915, and state what they represent? (Witness examines documents.)

A. The letter of January 18th, 1915, addressed to the 72nd Street Amusement Company, Mr. L. Bolognino, No. 53 East 72nd Street, New York City, is a notification that—

Mr. Jeffery: I object to his stating it.

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By the Court:

Q136. It is a notification that was sent to your knowledge? A. It is a notification that was sent.

Q137. To your knowledge? A. No, it was not signed by me.

Q138. That does not prevent it being known by you? A. I know that it was sent.

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Mr. Church: I offer the paper in evidence.
Marked Complainant's Exhibit G.

A. (Continued) The letter of January 18th, 1915, addressed to the Universal Film Exchange, No. 1600 Broadway, New York City, was a notice that was sent.

Mr. Church: I offer this letter referred to by the witness in evidence.

Marked Complainant's Exhibit H.

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A. (Continued) The letter of March 3rd, 1915, addressed to the Universal Film Manufacturing Company, No. 1600 Broadway, New York City, is a copy of a letter that was sent.

Mr. Church: I offer the paper in evidence.
Marked Complainant's Exhibit I.

Q139. How were these notices sent, Mr. Marvin?
A. They were sent by registered mail.

Mr. Church: I understand that the two last papers Exhibits H and I are acknowledged to have been received.

Mr. Jeffery: Yes. I do not know about the first one, but the last two were received by the Companies to which they were addressed.

RDQ140. What is this paper that I show you?
A. This is apparently a register receipt.

RDQ141. What is the date of it? A. It is dated January 19th, 1915.

RDQ142. Please state if upon this register receipt there is a note of the sending of the notice, or the package, to the 72nd Street Amusement Company? A. There is such a notation.

Mr. Church: I offer the official registry receipt in evidence and ask that it be marked.

Marked Complainant's Exhibit J.

Mr. Jeffery: I think it is only fair that I should object to that on the ground that it does not show the receipt by any defendant here. It shows the receipt by a company that is not a defendant.

RDQ143. Will you now please examine the card that I show you and state what it is? A. This is a register receipt dated January 19th, 1915, and signed with the name of L. Bolognino.

RDQ144. Who is L. Bolognino? A. He is the president of the Prague Amusement Company.

Mr. Church: I offer this registry receipt in evidence and ask that it be marked.

Mr. Jeffery: I object to the card on the ground that it is irrelevant and immaterial. I admit it was signed by some agent of Mr. Bolognino who is the president of the Prague Amusement Company.

The Court: Objection overruled.

Marked Complainant's Exhibit K.

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RDQ145. Mr. Marvin, to what extent has mechanism for supporting and feeding perforated film as shown and described by the Latham patent embodying first the devices for supporting the film before and after exposure, second, positively driven toothed feed wheels entirely disconnected from the supporting devices located at opposite sides of the exposure window and adapted to carrying the flexible film by the engagement of their teeth with the equally spaced holes in the edges of the film and to respectively produce and take up slack in the film, and thirdly, the intermittently acting feeding devices also provided with teeth which engage with the holes in the film whereby the film is intermittently drawn across the exposure opening? A. That construction is universally used in projecting machines used in this country and has been universally so used for many years.

RDQ146. Do you know of any projecting machine on the market that does not embody that construction? A. I do not.

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RDQ147. How many machines embodying that construction do you suppose are on the market today? A. I know that upwards of forty thousand of such machines have been sold in the last seven years. I suppose that probably twenty or twenty-five thousand machines are in use at the present time.

Re-cross Examination by Mr. Jeffery:

RXQ148. Are you referring to the projecting machine, or do you include cameras? A. I am referring to projecting machines.

RXQ149. You said, as I understand you, that

you did not consider the Prague Amusement Company as a licensee; is that correct? A. Yes.

RXQ150. Is the Kalem Company a licensee under agreements with the Motion Picture Patents Company? A. Yes.

RXQ151. If the Prague Amusement Company used a film manufactured and supplied by the Kalem Company, would the Prague Amusement Company then be a licensee? A. Well, that would depend upon whether when the Prague Amusement Company used the film from the Kalem Company, it was complying with the other terms established by the Patents Company to be complied with by licensees while they were licensees.

RXQ152. Are there any projecting machines manufactured which are not manufactured under license from the Motion Picture Patents Company? A. I do not know of any such machines.

RXQ153. And the Motion Picture Patents Company licenses those machines under a number of patents, does it not? A. Yes.

RXQ154. Until the expiration of the patent, it licensed them under the Edison camera patent and Edison film patent which originally were embodied in patent No. 589,168? A. Well, I do not think you could say that they licensed the projecting machines under those patents because those patents do not cover projecting machines. I think what it did do was license users of projecting machines to use licensed film so long as the film was covered by the patent owned by the Patents Company.

RXQ155. The Motion Picture Patents Company owns the Armat patent which was issued after interference with Casler and Latham? A. Yes, I believe so.

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RXQ156. They grant licenses to projecting machine manufacturers under that patent? A. I think that is included in a number of patents under which projecting machines are licensed, but I would not want to speak positively about that.

The Court: I do not see why it is not enough that this particular machine which is complained of was licensed under the Armat patent.

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RXQ157. And when you license a manufacturer of projecting machines under one patent he has to take a license under all the patents, does he not?

A. No.

RXQ158. Under all the patents named on that notice? A. Only under the patents the inventions of which are included in his machine. We license some manufacturers under some patents and other manufacturers under others. They are not all under the same patents but there are some patents under which all projecting machine manufacturers are licensed.

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RXQ159. And this arrangement that you have spoken of in your direct examination which is the tying up of all these patents in this agreement is universal with all these projecting manufacturers, is it not—

Mr. Jeffery: I withdraw the question.

Prima facie Proofs Closed.

(Discussion off the record.)

DEFENDANTS' PROOFS.

Mr. Jeffery: I offer in evidence a copy of the license notice which was yesterday marked for identification Defendants' Exhibit 1.

Marked Defendants' Exhibit 1.

It is admitted and stipulated by counsel for the complainant that the Simplex machine, Defendants' Exhibit 3, which bears the notice heretofore referred to, a copy of which is Defendants' Exhibit 1, was manufactured by the Precision Machine Company of New York City and sold by it to the 72nd Street Amusement Company, a New York corporation, operating the 72nd Street Playhouse, in the Borough of Manhattan, City of New York, at the time of said sale, and that when it was so sold it bore the said notice.

Also that if Mr. Lawrence S. Bolognino were called as a witness in this case he would testify that the 72nd Street Playhouse was leased by the said 72nd Street Amusement Company on November 2nd, 1914, to the Prague Amusement Company, one of the defendants here, and that along with the premises and among the equipment which was included in the said lease was the said machine, Defendants' Exhibit 3, which at that time bore the said notice.

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LAWRENCE S. BOLOGNINO, being present, is now sworn and cross examined by Mr. Church.

Cross Examination by Mr. Church:

XQ1. Mr. Bolognino, you are familiar with the terms upon which the Patents Company authorized

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the use of machines put out by its licensed manufacturers of projecting machines?

Mr. Jeffery: I object to that on the ground that it is immaterial and on the ground that the Court has already sustained objections to that very question.

Mr. Church: I withdraw the question.

XQ2. You are the president of the Prague Amusement Company? A. Yes.

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XQ3. And you are also the president of other companies? A. Yes.

XQ4. Exhibiting machine companies; that is to say, exhibiting companies? A. Yes.

XQ5. What other ones, please mention them?
 A. The Eros Amusement Company; the Heyday Amusement Company; the Ausonia Amusement Company; The Trocadero Amusement Company; the 44th Street Amusement Corporation; the Brunelli Amusement Company, and the Bofan Amusement Company.

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XQ6. Were you connected with the Star Motion Picture Company? A. Yes, I used to be, up to two years ago.

XQ7. What theatre was operated by that company? A. The Apollo.

XQ8. Where? A. 304 Eighth Avenue, New York City.

XQ9. Were any of the concerns with which you are, or were, connected, licensees of the Patents Company?

Mr. Jeffery: I object to that as incompetent, immaterial and irrelevant and as among the questions the objections to which

the Court sustained when asked the preceding witness, Mr. Marvin.

Mr. Church: Exception.

A. (No answer.)

Mr. Jeffery: It is further stipulated that since the execution of the agreement between the Motion Picture Patents Company and the Precision Machine Company, Incorporated, the Precision Machine Company has sold projecting machines manufactured by authority of said agreement and sold the same to customers located in states outside of the State of New York, all such machines bearing the plate and notice that has been referred to in this case as Defendants' Exhibit 1.

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This stipulation is made subject to complainant's objection that it is immaterial and irrelevant to the issues in this case.

It is further stipulated and agreed for the purposes of this case that the motion pictures, "The Five Pound Note" and "The Refugees," which are stated in the stipulation, Complainant's Exhibit E, to have been used on March 17th, 1915, by the defendant the Prague Amusement Company at said 72nd Street Playhouse by feeding copies of said motion pictures through said machines, were thus exhibited on the machine, Defendants' Exhibit 3, said machine having attached to it at that time the film feeding reel, and the take-up or winding reel.

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This stipulation is intended to supplement and make more explicit the said stipulation,

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Complainant's Exhibit E, but is not intended as a substitute therefor, and said stipulation is understood as remaining in full force and effect.

EDWIN W. HAMMER, called as a witness on behalf of the defendants, being duly sworn, testifies as follows:

197 Direct Examination by Mr. Jeffery:

Q1. What is your name, age, residence and occupation? A. Edwin W. Hammer. Age, 48. Residence, East Orange, New Jersey. Occupation, consulting electrical and mechanical engineer and solicitor of patents.

Q2. Please state what education and experience you have had in mechanical and scientific matters and particularly what experience you have had with machines for taking and exhibiting motion pictures? A. I have been practicing my profession for thirty odd years. My experience dates from the year 1884 when I was connected with the exhibition of Mr. Edison's inventions at the Electrical Exposition, being held in that year in Philadelphia under the auspices of the Franklin Institute. During the succeeding years I had considerable engineering experience in connection with electric lighting and power matters and this included the superintendency and managership of an Edison central station plant for lighting and power distribution in Fall River, Massachusetts.

In 1889 I spent nearly the entire year in Paris in connection with Mr. Edison's exhibit of his inventions at the Paris Exposition of that year,

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and in 1890 continued the exhibition of those inventions in this country, in New York City and in Minneapolis.

From 1891 to the present time I have had a very intimate connection with patent matters in connection with patent suits of large corporations including the Edison Electric Light Company, the Thomson Houston Company, the Edison General Electric Company, the Edison Company for Isolated Lighting, the Westinghouse Electric and Manufacturing Company, the General Electric Company, and others.

For fifteen years I was the technical man of the Board of Patent Control of the General Electric and Westinghouse Electric Companies and during that time had intimate connection with considerably more than a thousand patent cases.

I am a Fellow of the American Institute of Electrical Engineers; a Member of the American Society of Mechanical Engineers; a Member of the Franklin Institute, and am connected with other scientific bodies.

I have testified many times before the United States Courts as to matters of fact and opinion, including at least one litigation involving projecting machines for moving pictures and having to do with the proper presentation of such pictures upon the screen.

From the beginning of Mr. Edison's practical work in connection with moving pictures as known to the public I have been very much interested in this subject and have kept informed as to the general progress of the art.

Q3. Please briefly describe the device which is stated in the specification of the patent in suit to constitute the alleged invention of said patent,

considering it as a disclosure to those skilled in the art. Please state first whether you have read and are familiar with the said patent in suit? A. I have read the patent in suit and believe I understand it.

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It specifically states that it has reference to an apparatus for projecting pictures on a screen whereby the movement of the objects may be accurately exhibited. The purpose of the invention is said to be the provision of an apparatus capable of continuously projecting, or exhibiting, upon a suitable surface, a great number of pictures taken from moving objects and arranged upon a strip or film of great length, "whereby each picture in the strip is brought to rest at the moment of projection" so that there is given to the eye the desired impression.

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The specification calls attention to the fact that if a continuously moved picture-bearing strip be employed in a projecting apparatus and this continuously moving strip be moved uninterruptedly across the optical axis—past the lens of the machine—a light of very high intensity is necessary to give satisfactory results.

The patentee then states that such a very intense light is not required for satisfactory projection with an apparatus embodying his construction inasmuch as the "stoppage of each picture during its exposure permits the requisite quantity of light to pass through the condenser, the picture, and the objective to the screen or plane surface upon which the image is projected when the light employed is only of a moderately high power."

It will be understood that the patentee here differentiates his mechanism from some other mechanism in that he brings the film or picture

bearing strip to rest at the moment of projection, or when the picture is to be thrown upon the screen, and that by reason of the fact that the film may be brought to rest at such a time the requisite amount of light is permitted to pass through the film to the screen. This will be understood better when it is recognized that a machine employing a continuously operating or moving film should also be provided with a shutter which will shut off the light entirely from the screen except at the moment when the picture to be exhibited is actually passing the optical axis of the machine, and as the continuously moving picture is in such a position for an extremely brief interval the amount of light which is utilized at such a time is necessarily very small and unsatisfactory for projection purposes in comparison with the use of a device where the film may be exposed for what is really an appreciable period of time.

It is also understood that under these circumstances the continuously moving film would require a very intense light in comparison with the size of the light required for a film which is brought to rest for the longer interval.

The specification states that in consequence of this general principle of bringing the film to rest at the moment of exposure, the invention consists "in an apparatus for projecting successively a large number of pictures of moving objects embodying, among other things, means for bringing each picture to rest at the moment of projection, means for reducing the strain the picture film would otherwise suffer from the rapid interruption and renewal of its movement, and means for maintaining uniformity of movement of the film as it unwinds from the delivering reel and as it winds

upon the receiving reel, all as set forth in the claims at the end of this specification."

It would therefore appear to be the patentee's idea that the fundamental conception which he had and which he was giving to the world was the idea of bringing the picture to rest at the moment of projection in projecting machines so as to in that way secure a suitable illumination of the picture upon the screen with the minimum amount of light.

In connection with this, however, he puts forward the additional idea that by reason of the stoppage of the film for purposes of projection there must necessarily be a subsequent movement of the film which has been brought to rest, and that as a consequence of that interrupted movement of the film certain strains would be brought to bear upon the film which are obviated by the utilization of certain mechanisms which his specification describes; it also indicates that it is his desire to maintain a uniformity of movement of the film as it unwinds from one reel, and as it winds upon the other reel.

In the drawings of the patent in suit the mechanism is clearly illustrated in Fig. 6 of the patent which indicates clearly the general means that are employed for securing the stoppage of the film and renewing this movement and also for the protection of the film against strain, and the means for maintaining the uniformity or continuity of movement from one reel to the other reel. For example, in Fig. 6, it will be seen that the bulk of the film to be exhibited is wound upon a reel 22 mounted upon a fixed pivot 23. The film is drawn continuously and with uniformity from this reel 22 in an upward direction over the idler roller 54 by means of the continuously rotating roller 39. This roller 39 pulls the film from the reel 22

and delivers it to what is shown as a loop of slack film 21a. At the upper end of the machine on Fig. 6 is a take-up reel 24 mounted upon a pivot 25 driven from the general source of mechanical power by a friction connection, and the film is fed to this reel 24 at a uniform rate by means of the feed roller 46 which operates continuously and at uniform speed, taking the film which has been delivered from the lower reel 22 and supplying it to the upper reel 24.

The exposure window, or point through which the light must pass through the picture and to the lenses of the apparatus is what is known as the exposure window or opening 56 and just above this window 56 will be seen a feed roller 50. This feed roller 50 has an intermittent movement but it is so proportioned with respect to the continuously moving rollers 39 and 46 that it handles the same amount of film within a definite period of time that the continuously operating rollers 39 and 46 handle, in spite of the fact that it moves intermittently.

The effect of this combination of intermittently moving feed devices and continuously moving feed devices is to draw the film from the delivery wheel 22 at a uniform rate and supply such film to the loop of slack film 21a upon which the intermittent feed device 50 draws for its supply in moving the film past the exposure window or opening 56.

This movement of the film by the intermittent feeding device supplies such film to the second loop of slack 21b upon which the continuously moving feed device 46 draws for its supply so that we have in this apparatus two continuously operating feed devices 39 and 46 for supplying and taking up a supply of slack film and an intermittently

moving feed device for drawing upon the first loop of slack film and supplying film to the second loop of slack.

The specification points out at page 2, line 21, that the function of the two reels is merely to support the bulk of the film while successive sections of it are subjected to the feeding and exposing mechanism. One of the reels supplies the films for exposure and the other coils up and takes care of the film after exposure.

In this construction it will be seen that there is provided an intermittent movement of the film past the exposure window for exhibition purposes, and that in spite of these interruptions in the movement of the film the delicate strip is protected against undue strain by the fact that the jerks of the intermittent feed device are not against the weight or bulk of the film carried by the delivery wheel but is against the loop of slack film 21a. In other words, the amount of film upon which the jerk of the intermittent feed device is brought to bear is of very short length and of practically negligible weight and inertia so that the strain upon the film is minimized at that time. In like manner the continuous pull of the film by the feed roller 46 is not against the weight of the mass of film upon the delivery reel 22 but is upon the short length of slack film 21b.

It can readily be understood that if a sudden jerk should be brought to bear upon the mass of film carried by the delivery wheel 22 in securing the rapid though intermittent movement of the film, such film would be subjected to great mechanical strain which would tend to destroy it.

This general description which I have given of the operation and result of the operation of the

devices illustrated and described in the Latham patent is confirmed in the sentence beginning at line 65, page 3, in which it states:

"It will be understood from the description
"that follows that the loops of slack below
"and above the exposure window are alter-
"nately thrown out and then taken up by the
"operation of the sprocket drums, respective-
"ly, and that they produce and take up the
"slack by their own positive action entirely
"independent of the film supporting reels at
"the extremes of the apparatus."

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In the patent in suit the film is described as having holes near its edges with which may co-operate teeth projecting from the edges of the feed rollers 39, 50 and 46 for the continuous and intermittent feeding of the film.

In other words, the feeding rollers 39, 50 and 46 are sprocket feed devices, in which there is a co-operation between the holes in the film and projections from the feed rollers.

That portion of the specification beginning at line 117 on page 3 and extending to line 70 of page 4 refers to what is there set forth as important and valuable parts of the invention in that they are set forth as producing accurate movement of the film and the proper registration of the film with the exposure window or optical axis for purposes of projection. The idea apparently seems to be that the combination of a perforated film with sprocket feed devices insures the regular movement of the film by the teeth on the sprocket such teeth necessarily moving the film forward merely as far as the rotation of the sprocket will

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permit, and holding the film back from further movement, and guaranteeing that a movement corresponding to the number of teeth and the spacing of the holes shall take place.

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In other words, the mere use of a perforated film and sprocket feed device guarantees a definiteness of movement which is a quality or function of that particular combination of holes to be co-ordinated with the projections on the feeding rollers. The specification of the patent in suit does not describe these holes as having particular characteristics and the specification does not describe the teeth or projections on the sprocket rollers as being of any particular type or size or spacing except that there is to be a co-operation between holes and sprocket projections.

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Apparently the patentee realizes for his conception that he has secured something novel and useful in this apparatus not upon the provision of teeth on a sprocket wheel and not upon the punching of holes in the film with which those teeth may co-operate, but rather in the use of those particular instrumentalities in an apparatus which combines first of all supports for the bulk of the film and secondarily means for handling the film intermittently without subjecting the film to strain. In other words, his primary thought appears to be that he has found means for economizing in the size of the lamp or light which he must employ for suitable exhibiting purposes, and that this economy comes about through the fact that he stops the film while he is showing his picture.

On the other hand, he recognizes that the mere stoppage of the film is not enough because with the use of a very long film which necessarily must be of considerable weight and inertia the inter-

mittent jerking of the film to secure the periods of rest must necessarily involve considerable strain applied to the film. It is on this account that he has incorporated in his camera means for producing slack through the use of continuously operating feed devices, this slack being drawn upon by the intermittent feeding devices instead of such devices operating upon the bulk or weight of the film upon the supply reel.

As a consequence of the construction illustrated and described in the patent the patentee says at

line 94, page 2:

"Hence in a device of the construction described the period of rest of the film is four times greater than its period of movement. To prevent any vibration of the picture at the moment of projection the smooth surfaces of the broken gears 47 and 48 should preferably be held in close sliding contact."

In other words, this relatively long period of rest permits the eye to become impressed with the picture which is thrown upon the screen and full utilization is thus secured of that quality of the human eye which is known as "persistence of vision" which simply means that the eye persists in seeing an object after it has actually withdrawn from sight. In connection with this apparatus there is illustrated and described a shutter device 31 illustrated in the several drawings of the patent but more particularly shown in Fig. 2.

In Fig. 2 this shutter consists of a single wing or moving arm of small size which, as a matter of fact, only covers about 40 degrees of the circle through which the shutter rotates. It is designed

that this single arm shutter shall pass the exposure window and optical axis or lens at the time and during the time that the movement of the film is taking place so that the actual movement of the film is hidden from the eye; this means that the eye only sees the picture while the film is at rest. This shutter is generally described at line 106 of page 4 of the patent where it says:

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"The shutter 31, carried by the shaft 28,
"has but a small solid section. Its use is to
"cover the film during the interval of move-
"ment of each picture."

It is a further consequence of this construction that inasmuch as the film is exposed while the film is at rest the film is also illuminated throughout the period of rest. It therefore follows that the period of rest and illumination is greater than the period of movement, and that the period of illumination is greater than the period of darkness. In this way it was hoped to minimize, so far as possible, the flickering of the picture upon the screen.

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Recess to 2:00 P. M.

Afternoon Session.

EDWIN A. HAMMER resumes the stand.

Mr. Jeffery: I offer in evidence the patent to Kidder, No. 224,440.

Marked Defendants' Exhibit 5.

I offer in evidence the patent to Eckerson, No. 433,776.

Marked Defendants' Exhibit 6.

I offer in evidence the patent to J. L. Cox,
No. 508,814.

Marked Defendants' Exhibit 7.

Mr. Church: I object to the patent as not
pledged in the answer.

Mr. Jeffery: The patent of Cox is intro-
duced as evidence of the prior state of the
art.

Direct Examination by Mr. Jeffery (continued):

Q4. Please examine the patents to Kidder, Eck-
erson and Cox, being respectively Defendants' Ex-
hibits 5, 6 and 7, and state what, if anything, they
show as to the maintaining of a loop to prevent the
strain on a reel of thin material in the machine?
A. The Kidder patent No. 224,440, relates to a
printing machine for a printing press in which the
paper upon which the imprint is to be made is
drawn from a delivery reel *a* and taken up by a
take-up reel *f*.

The web of paper is long and thin and is neces-
sarily fragile and poorer qualities of paper are
more fragile than others. Such a web of paper
needs to be drawn through the printing press and
in the type of press described it is essential that
the movement of the web of paper shall be inter-
mittent and that the paper shall be brought to rest
when the imprint is made upon it.

The Kidder specification says at page 1, line 20:

"Heretofore in all presses known to me
adapted to print a long strip of paper or other
material the paper was unwound from the
drum or reel by the action of the feed, the
drum or reel being one side of the platen and
the feed the other side. The effect of this is

to throw more strain upon the printed paper than is desirable, especially when the paper is of a poor quality; and one feature of my present invention is designed to remedy this difficulty, this feature of my invention consisting in the use of two feeds, one serving to draw the paper from the drum or reel or other supply, so as to have the paper slack between the first feed and the form, while the other feeds the paper to the action of the type by simply taking up the slack furnished by the first feed."

The general course of the web of paper is illustrated in Figs. 1 and 2 of the Kidder patent, but for purposes of convenience and comparison I have had prepared a diagram showing the features of the Kidder apparatus which have to do with the movements of the paper web or strip. I produce this diagram at this time.

If reference be made thereto it will be seen that we have a reel *a* or a device for supporting the web of paper before it is printed. This reel of paper is necessarily of great weight and any intermittent pull thereon would tend to tear or rupture the paper.

To obviate this difficulty the Kidder patent provides a pair of rollers *a¹* *a²*, which have a continuous and uniform movement and tend to draw the paper continuously from the reel *a* and deliver it to a loop of slack paper *C*. The movement of the strip of paper through the press is secured through the feed rollers *a⁷* *a⁸* which have an intermittent movement and drew the strip of paper intermittently past the point *B*, at which the impression is to be made upon the paper.

It will be seen that this intermittent pull or forward feeding of the strip of paper by the roller $a^7 a^8$ is a pull against the loop of slack paper C and not against the paper upon the roller or reel a . In this way the Kidder patent provides against undue strain upon the paper with possible rupture. The action of the intermittent feed rollers $a^7 a^8$ is to form a second loop of slack paper C, from which the take-up reel draws its supply of paper in winding it up.

It will thus be seen that the Kidder mechanism has a main feed $a^7 a^8$ for drawing the paper past the platen intermittently and an auxiliary feed $a^1 a^2$ for continuously drawing the paper from the reel a and forming the slack C.

As the Kidder patent says at page 1, line 47:

"The object is to keep the paper slack between the auxiliary feed $a^1 a^2$ and the main feed $a^7 a^8$ in order to relieve the latter feed of the duty of drawing the paper from the reel or other supply."

The specification also says, page 1, line 63:

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"The strip of paper C extends from the feed $a^1 a^2$ through suitable guides and between the bed and platen through the main feed $a^7 a^8$, a^7 being a roll actuated positively, while a^8 may be actuated by friction only. In a bed and platen press this roll a^7 must be actuated intermittently, and in order to effect this I have combined with this feed $a^7 a^8$ the clutch device shown in detail in Figs. 5 and 6."

The specification of the Kidder patent shows that the paper may be either rolled up on a second

reel *f* after being printed upon, or the paper may be cut into strips of the necessary sizes after printing, according to the wish of the user. But it is distinctly specified at page 2, line 63, that where the take-up roll *f* is employed "the paper must be so wound upon this drum that it will always be slack between the feed *a*⁷ *a*⁸ and the drum *f*."

Mr. Jeffery: I offer in evidence the diagram of the mechanism of the Kidder patent, Defendants' Exhibit 5.

Marked Defendants' Exhibit 8.

Mr. Church: The diagram referred to is objected to by counsel for the complainant, on the ground that it is manifestly not a correct representation of the mechanism of the Kidder patent.

A. (Continued) Taking up the Eckerson patent No. 433,776, referred to in the question, it will be seen that it is a patent also that relates to printing presses. This patent also calls attention to the fact that, if desired, the paper may be cut up into sheets of any size, after printing, as illustrated in Fig. 1, for example, while it may also be wound up on a take-up reel after printing, as illustrated in Fig. 13, for example.

The general course of the paper from the delivery reel to the take-up roll is also to be noted from Figs. 1 and 13 of the Eckerson patent. The fact is that if we turn to Fig. 1 it will be seen that the paper is drawn from the delivery reel *Q* by continuously operating feed rollers *RR*¹ and forms a loop of slack paper between such continuous feed devices and the intermittent devices *TT*¹ *UU*¹ which are provided to move the paper intermittently through the press. Where a take-up reel

is employed, as in Fig. 13, the paper runs from the intermittent device around a friction device X^1 and from there is drawn upon the take-up reel which is driven by the belt y .

The especial objects of the improvement of this Eckerson patent are thus stated in the specification, page 1, line 25:

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"The especial objects of this improvement are to improve the platen by the introduction of a sliding removable impression plate; to so arrange the paper feeding devices that there shall always be a slack loop of paper between the impression plate and the roll from which the paper is taken. * * *"

The general operation of the apparatus is described at line 80, page 1:

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"The roll of paper to be printed from is carried upon a shaft in suitable supports at one end of the machine, the paper passing from said roll between a pair of rollers which are connected with another pair by gearing in such a manner that the paper passing between the two sets of rollers shall always form a loop at least sufficient in quantity to supply the paper needed for one impression, thus preventing the danger of tearing or otherwise injuring the sheet in its passage through the machine, as this slack prevents the sudden jerk which will come upon the paper owing to the intermittent movement of the feed rolls, which supply it to and take it away from the impression plate."

One might almost imagine this description was written upon the apparatus of the patent in suit.

I also call attention to the paragraph beginning at line 19 on page 4 of the specification for a further detailed description of the operation of the apparatus. I also call attention to the following statement at line 99, page 4:

245 "Thus the paper is continuously passing from the roll Q, falling down beneath the roll R¹ in a loop which is taken up at each movement of the intermittently moving feed rolls. By this means the jerking movement of the feed rolls upon the roll of paper is obviated and all danger of tearing it from this cause done away with."

It will also be seen from the paragraph beginning at line 32 of page 5 of the specification that it is the intention to retard the forward movement of the paper before it is taken by the take-up rollers, through the use of the brackets X¹ which is acting to form a second loop of slack upon which the take-up reel draws.

246 In order to illustrate graphically the general course of the web of paper through the Eckerson printing press I have had prepared a diagram which I now produce and which shows diagrammatically the apparatus to which reference has heretofore been made. In other words, the course of the paper on this diagram, as well as in that of the Kidder diagram, Exhibit H, is from the bottom of the diagram upwards. The paper leaves the delivery reel Q and passes by the feeding mechanism R¹ which acts to pull the paper from the reel Q and forms a first loop of slack paper against which the pull of the intermittent feed device T U is brought to bear.

The intermittent action of these feeding devices carries the paper past the part of the press where the printing is done and forms a second loop of slack between the intermittent device U and the second friction device; in this manner the upper or take-up reel draws continuously upon the second loop of slack paper and the operation of the whole device is to secure an intermittent movement of the paper past the platen and to have the intermittent jerks brought to bear upon the loops of slack paper rather than upon the bulk of paper upon the delivery reel Q.

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Mr. Jeffery: I offer in evidence the diagram of the Eckerson patent No. 433,776.

Marked Defendants' Exhibit 9.

Mr. Church: That is objected to by counsel for complainant on the ground that the exhibit is not a faithful representation of the mechanism of the Eckerson patent.

A. (Continued.) Taking up now the Cox patent No. 508,814 referred to in the question, it will be seen that this also relates to printing presses in with the same problem of protecting a delicate web or strip of paper against rupture when subjected to intermittent jerking movement is recognized and provided for through the production of loops of slack paper upon which the intermittent jerks are brought to bear.

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If reference be made to the drawing accompanying the Cox patent, it will be seen that there is a feed or delivery roll W of paper at one end of the press and that this paper passes over a continuous feed device A and after passing about the web printing mechanism H H¹ is made to reach and be acted upon by an intermittent feed device 1, and

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then is passed forward either to the shears or to a take-up roll.

The Cox specification says at page 1, line 12:

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"This invention relates to web printing presses and its object is to provide an improved system of feeding the web through the press so that it may be positively and continuously drawn from the paper roll into the press and positively and continuously delivered both during and after the making of an impression thereon * * *"

Speaking of the production of the slack paper as a result of the action of the continuous feed A, the specification says, page 1, line 87:

"This governor roller C is a gravity roller, and takes up any slack of the infed web during the taking of an impression, and maintains the tension of the web by its weight. It may be otherwise mounted or guided provided it is left free to take up the slack in web."

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The specification also says at page 1, line 100:

"The parts are so adjusted that the amount of web positively drawn from the roll W and fed into the press by the feed devices and the amount of web positively drawn out of the press by the delivery devices will be equal."

The paragraph also says in making clear that this apparatus is for the protection of the paper, the following at page 2, line 3:

"While the impressions are being taken, the web is nipped between the beds and cylinders

and is, of course, held thereby, but during this time the roller *I* is rotated at such a speed that the loop of web thereunder is paid out to the delivery fast enough to prevent tearing of the web and at the same time the governor roller *C* (which is supported by the loop of web thereunder) descends and takes up all the web fed in during the taking of an impression, holding the web always at a constant and uniform tension."

In order to clearly indicate in the simplest diagrammatic form the general course of the web of paper through the Cox printing press I have had prepared a diagram which I now produce which shows this matter clearly.

In other words there is a delivery wheel *W* from which the web of paper is drawn by the continuously acting feed rollers *A*, the operation of which produces a first loop of slack paper. Against this slack is impressed the pull or jerk of the intermittent feed device *I* drawing the paper past the point at which the printing takes place.

The operation of this intermittent feed device produces a loop in the paper against which the pull of the uniform feed device *S* is brought to bear in supplying the paper to the take-up roller at the upper end of the diagram.

In all three of these printing press patents, the various parts are positively connected together by suitable gearing so as to maintain a positive operation of the different devices and secure such a harmonization or co-ordination of movement as to maintain the necessary amount of slack at the proper places against which the pull of the feeding devices may be brought to bear and in that way secure the desired safety of operation, and in that

way to prevent tearing or otherwise defacing the paper.

Mr. Jeffery: I offer in evidence the diagram of that Cox patent No. 508,814, produced by the witness.

Marked Defendants' Exhibit 10.

Mr. Church: I object to that as not a fair representation of the mechanism of the Cox patent.

257 Q5. In your opinion are the diagrams you have had made and which you have produced of the Kidder, Eckerson and Cox patents correct representations of those patents respectively? A. Yes, for the purposes of diagrammatic representation.

It may be noted that on these diagrams there are certain designations given to the various parts at the right of the diagram, and it is to be noted that these are merely expressions relating to the general mechanism of the Latham patent in suit and are intended to show the similarities of operation and function with corresponding devices in these printing press patents.

258 Mr. Jeffery: I offer in evidence copy of United States patent to Augustin Le Prince, No. 376,247, dated January 10, 1888.

Marked Defendants' Exhibit 11.

Mr. Church: That is objected to as not pleaded in the answer.

Mr. Jeffery: This patent is introduced to show the state of the prior art.

Q6. Have you examined and do you understand the Le Prince patent, Defendants' Exhibit 11? A. Yes.

Q7. Please explain it as briefly as is consistent with enabling the Court to understand the mechanism and invention there disclosed. A. The Le Prince patent describes both a taking machine or camera and a delivering device or projector. Fig. 3 shows a general view of the camera device and Fig. 7 a general view of the projector device.

It is to be noted that this patent contemplates the use of a long strip of photographic film, or its equivalent, and that in the camera apparatus such a film is unperforated and is moved forward by the effort of the take-up reels themselves. For example, in Fig. 3 we will find a delivery reel D, and a take-up reel D¹. These two reels are moved by a gear wheel B, mounted upon a shaft A. This gear B has a mutilated gear or, in other words, the teeth extend only part way there-around. Such teeth co-operate first with similar teeth on the delivery reel D and then with corresponding teeth on the take-up reel D¹. It will be understood that the wheel B in co-operating with the reel D causes such reel to deliver a certain amount of slack film which will not be immediately drawn past the exposure window of the apparatus because, in the first place, the driving teeth of the wheel B have not yet reached the take-up reel D¹ and in the second place because the pad or frame J is being pressed against the film at the point of exposure, so as to hold it against movement.

On the other hand, when the take-up reel D¹ begins to move the frame J is drawn away from the film at the exposure window and the reel D draws upon the loop of slack film which the delivery reel D had previously formed.

It is provided in the Le Prince patent that when pictures taken in the above apparatus are to be used for exhibition purposes they may be mounted

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upon parallel metal strips which have holes punched in their edges and in this way built up into a long strip of positives which are ready for exhibition purposes. In the feeding of this strip Le Prince employs two sprocket wheels for feeding purposes indicated at G-6 of Fig. 7. As to this the specification says, page 3, line 79:

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"The transparencies are adjusted on a pair of endless metallic ribbons accurately punched with small round holes 11-7 in which fit the pins P and P¹ fixed on the driving and guide drums G-6, so that after having been wound around the drum D they are pulled and brought into position alternately by the action of gearing wheels N-5, O-5 and crank Q-5."

The general operation of the intermittent feeding of the apparatus is to be found on page 2, line 97 of the specification running down to the end of that paragraph.

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We have here therefore, in this Le Prince patent the provision of an exhibiting machine in which a strip is employed, carrying a large number of pictures, this strip having perforated edges and being fed forward by sprocket wheels G-6.

This patent also indicates that where an intermittent movement of the film is to be secured, it is necessary and desirable, as in the printing press art, to have the pull of the intermittent feed device brought to bear upon a loop of slack film rather than upon any reel which carries a large amount of film which may be heavy and have a large inertia.

Q8. Have you read and do you understand and have you examined the British patent to Greene and Evans No. 10,131 of 1899? A. Yes.

Q3. Will you please explain as briefly as is consistent with making it clear the device which is the subject of that patent, but before you begin your answer I will offer in evidence the said Greene and Evans patent.

Marked Defendants' Exhibit 12.

A. This Greene and Evans patent No. 10,131 of 1889, contains a very fair disclosure of a moving picture camera which has as its important feature the fact that it provides for the stoppage of the film at the moment the exposure is to be made and the photograph taken. And that this involves an intermittent movement of the film, which, if a great length of film be employed, would necessitate the intermittent jerking of the film alone unless means were provided for preventing the intermittent jerk to be brought to bear on the heavy weight of film but rather upon a loop of slack film definitely provided for the purposes of protection.

This Greene and Evans apparatus is one in which the work is done with a single camera and lens and in which the pictures may be taken with great rapidity. It is also one in which there is a positive relationship established and maintained between the delivery wheel, the take-up reel, the intermittent feeding device and the continuous feeding device, through appropriate gearing.

In other words, as the specification says, page 1, line 13:

"To carry out our invention we provide a main shaft which is actuated either by a winch turned by hand, clockwork, or otherwise, to this shaft is attached wheel work and counter-

shafts by which the whole apparatus is driven and the necessary cycle of motions performed."

As a matter of fact the patentees arranged "a long roll of sensitive photographic film on one of the spindles" as stated at line 27, page 1.

The patent also calls attention to the fact that as fast as the film is fed from one reel it is taken up by the co-operating take-up reel, in spite of the intermittent movement of the film past the exposure window. The paying out and taking up apparatus of the Green and Evans patent is continuous in its operation and in connection therewith an intermittent feeding device is employed.

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All of this is indicated at line 39, page 1 of the specification as follows:

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"As both paying out and rolling up rollers have a continuous motion communicated to them by the driving shaft and as it is desirous that the film during its exposure to the light should be at rest, we provide an arrangement to effect this which is as follows: Immediately beyond the exposure screen and between it and the up-winding roller we place an intermittently acting drum of such a diameter and circumference as that each turn thereof will take up or roll forward the exact amount of film that is required for each picture, and in passing this film forward the drum also draws into the exposure position a fresh length of film ready to be exposed."

At line 14, page 2, we find the following statement relative to the form of a loop of slack film:

"The constant uniform motion of the paying out spindle as it unwinds causes a certain uni-

form length of the film to pass forward towards the exposure screen when it collects into a kind of loop in readiness for use, it cannot, however, pass into the position for actual exposure until that portion of the film occupying such position has been withdrawn, as soon, however, as the detent tooth attached to the drum escapes through the slot in the pinion the drum makes a single revolution and in so doing both removes the exposed film from the screen and at the same time draws the loop of fresh film which has been gathering into the exposure position, and at the same time passes toward the already exposed film into the form of another loop in readiness to be wound up on the winding roller, which being provided with a similar uniform continuous motion from the main shaft as the paying out roller proceeds gradually to wind up this loop so that it is wholly taken up by the time the escape tooth again rotates when a fresh loop of film is passed forward."

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There are two general schemes for producing these two loops of slack film and securing the intermittent actuation of the film past the exposure window, one of which is diagrammatically expressed in the drawing which I now produce.

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By reference to this drawing it will be seen that there is a feed wheel upon which is mounted the bulk of the film to be exposed and which is marked 10 on the diagram. Against the surface of this film and in frictional contact therewith is a continuously operating feed roller 12 which tends to feed forward the film which is mounted upon the reel and by reason of that constant feeding opera-

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tion produces a first loop of slack film indicated at 11. The apparatus for drawing upon this first loop of slack film is shown diagrammatically by the intermittently operating feed roller 16, provided with teeth, acting upon the film to draw it up past the exposure opening 15. The intermittent device 16 thus draws against the first loop of slack film and not upon the bulk of the film mounted upon the reel; at the same time it intermittently feeds forward a certain amount of film and thus provides a second loop of slack film. It is upon this second loop of slack film that the take-up roll 18 draws in winding up the film.

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A modification of this general arrangement is indicated in a second diagram which I produce and which has been marked "Greene and Evans No. 2." In this arrangement there are two reels, one to hold the bulk of the film before exposure and the other to receive the bulk of the film after exposure. In frictional contact with the two rolls of film is a feeding device which operates uniformly to draw off a definite amount of film from the feed reel and to wind up a definite and equal amount of film on the take-up reel.

The operation of this device is such as to provide a fresh loop of slack film 11 between the delivery reel and the exposure window and a second loop of slack film upon which the take-up reel may draw. Intermediate of these two continuously operating reels is the intermittent device 16 which is provided with teeth and which co-operates with the film in drawing the same forward intermittently past the exposure window. This intermittent feed device draws against the first loop of slack film and not upon the heavy mass of film upon the delivery reel.

This apparatus is provided with a suitable shutter which is described at line 45, on page 5 of the specifications.

The intermittent feed device with its projecting teeth is referred to at line 41, page 4 of the specification. It is to be understood that the shutter acts in such manner as to expose the lens while the film is in the position of rest.

I do not understand that the film used with the Greene and Evans apparatus is perforated although it may well be. The patent is silent on this subject. The fact is, however, that the intermittent feed device is provided with teeth and these teeth are adapted to co-operate with the film and draw it forward a certain and definite and predetermined distance, this tooth arrangement serving to act against the first loop of slack in the film provided by the continuous operation of feeding devices acting upon the film.

It is among the possibilities that the sprocket wheel 16 is designed to make its own perforations in the film, in which event such devices would co-operate with the same perforations if the film should be passed through the machine at subsequent times.

It is thus to be seen that in this Greene and Evans British patent there is disclosed a photographic apparatus for taking moving pictures, or photographing objects in motion, in which there is embodied a device for supporting the bulk of the film before exposure, and one for supporting the bulk of the film after exposure and feeding devices acting continuously upon the film to provide a definite forward feed of the film from the delivery reel and a definite supply of film to the take-up reel; it also discloses a toothed intermit-

tent feed device for drawing the film past the exposure window, this intermittent feed device taking up the slack formed below the exposure window by the first continuous feeding operation, and supplying a second loop of slack which is taken up by the second of the continuously operating feed movements.

In this patent there is also disclosed a friction feed at one part of the film and a sprocket feed on the intermittent.

281 The various parts are positively driven and are designed to obviate the possibility of rupture or other damage to the film during its operation and due to its great length or relatively great weight and inertia.

It is thus indicated clearly how it is possible to protect the film against damage when it is desired to bring the film to rest for purposes of exposure, and that the way in which this protection is to be carried out is through the co-operation with the intermittent feed device of continuous feeding devices which are on either side of the exposure window and are designed to form the slack and to take up slack in the film and in that way absolutely relieve the film of unnecessary strain.

Mr. Jeffery: I offer in evidence the diagram of the device of the Greene and Evans British patent No. 10,131 of 1889, being the first diagram produced by the witness.

Marked Defendants' Exhibit 13.

Mr. Jeffery: I also offer in evidence the diagram entitled, "Greene and Evans No. 2," being the second diagram of the said

Greene and Evans patent produced by the witness.

Marked Defendants' Exhibit 14.

Mr. Church: Both diagrams are objected to by counsel for the complainant as not faithful representations of the mechanisms of the Greene and Evans patent.

Q10. In your opinion are those two diagrams faithful and correct and accurate representations of the device of the alleged invention disclosed in the Greene and Evans patent? A. Yes, for diagrammatic purposes.

Mr. Jeffery: I offer in evidence the copy of the French patent to M. Marey, No. 208,617 of 1890.

Marked Defendants' Exhibit 15.

Mr. Jeffery: I also offer in evidence a translation of the said Marey patent No. 208,617 of 1890.

Marked Defendants' Exhibit 16.

It is stipulated that subject to correction this translation is a correct translation of the said Marey patent.

Q11. Have you read, examined and do you understand the device and invention disclosed in this Marey patent No. 208,617 of October 3, 1890, being Defendants' Exhibit 15? A. Yes.

Q12. Have you read a translation of the said patent? A. Yes.

Q13. Will you please explain the device set forth and disclosed in that patent as briefly as may conveniently be possible? A. This Marey French patent of 1890 is one which relates to a photo-

graphic camera to be used in the photographing of moving objects. It provides that the film shall be carried upon a reel prior to the exposure and that there shall also be provided another reel which shall hold the bulk of the film after exposure. It also provides that the movement of the film shall be arrested during the intervals of exposure and this means that the film shall be alternately started and stopped with great rapidity and frequency.

As the specification states:

"To produce stoppages of the sensitized strip the stoppage of the massive parts of the mechanism is not to be thought of as this would produce destructive shocks. On the other hand, to arrest the film at one point while the mechanism continues to pull it would result in its rupture."

In other words, it is recognized in this Marey patent of 1890 that it is out of the question to consider the practical operation of a device of this sort in which the jerking upon the film should be against the massive parts of the apparatus itself inasmuch as such an intermittent pull upon the massive parts of the apparatus would involve such strain as to tend to destroy the film or rupture it. In other words, there would be destructive shocks.

At the same time it is recognized by this Marey patent that some means must be provided to protect the film against breakage through the pulling upon that film when the film was held stationary at the exposure window for exposure purposes. We thus have the same general recognition of the

problems that have been so clearly indicated in the various printing press patents to which I have referred and also in the Greene and Evans British patent which I have just described.

For purposes of illustration and explanation I have had prepared and now produce a diagrammatic expression of the apparatus of the Marey French patent of 1890 from which it will be seen that there is a reel or a device for supporting the bulk of the flexible film before exposure and that this reel is given a continuous unwinding movement so as to form a loop of slack film. The take-up reel at the other side of the apparatus has film fed to it by the continuously rotating feeding device *I*. If no other device were employed the reels *I* would tend to continuously draw the film past the exposure window. As a matter of fact, however, this is not permitted because of a clamping device *C* which is made to intermittently press against the film near the exposure window and hold it against movement.

This pressure of the film against the exposure window does not result in damage to the film because the continuous pulling of the feed mechanism, *I*, is effective in bending over the long and very flexible spring device, *r*, which about takes up the slack above the exposure window. The effect of putting the small spring, *r*, under tension is to draw the film upward past the exposure window as soon as the pressure is released at the pressure device, *C*. It is thus to be noted that there are independent feed reels and take-up reels and apparatus for securing a definite and constant amount of film to the take-up reel; also the provision of a loop of slack film against which the pull of the intermittently acting spring, *r*, is

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brought to bear for the bringing of a fraction of the sensitive film before the exposure window.

Mr. Jeffery: I offer in evidence the diagram of the Marey French patent of 1890.

Marked Defendants' Exhibit 17.

Mr. Church: I object to it as not a correct representation of the mechanism of the Marey patent.

293 Q14. In your opinion, is the Defendants' Exhibit 17, a correct diagrammatic representation of the Marey French patent of 1890? A. Yes.

Mr. Jeffery: I offer in evidence a copy of the French patent to Marey, including the specification and drawings, being patent No. 231,209 of June 29, 1893.

Marked Defendants' Exhibit 18.

Mr. Jeffery: I also offer in evidence a translation of the said Marey patent.

Marked Defendants' Exhibit 19.

294 It is stipulated, subject to correction, that this translation is a correct translation of the said Marey patent No. 231,209 of June 29, 1893.

Q15. Have you read, examined, and do you believe you understand the device set forth in the drawings and specification of this Marey patent, Defendants' Exhibit 18? A. Yes.

Q16. Will you please explain this device as briefly as may be consistent with a clear description? A. This Marey patent of 1893, describes a photographic camera or its reverse, a photographic

projector, for moving pictures. The reversibility of the apparatus is indicated in the patent, where it says:

"The reversibility of this apparatus can easily be seen, if a strip carrying positive images lighted from the rear, are made to pass through the focus of the objective."

In this apparatus it is arranged that the film is automatically stopped at each exposure period, and that the film follows in the apparatus the path indicated by the mixed line, A, C, D, E, F, G, H, B of Figure 2.

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In order to most clearly follow out the course of the film and the general nature of the apparatus that is disclosed in the Marey patent of 1893, I have had prepared a diagram which I now produce, showing such an apparatus. As will be seen from this diagram two reels are provided, one of which is adapted to support the bulk of the flexible film before exposure, and the other which is designed to support the bulk of the film after exposure. Independent of these reels, and operating to feed forward, is a continuously rotating feed device, J, which draws the film steadily and continuously from the delivery reel, a, and in this way forms a loop of slack film. The take-up reel, B, is positively driven and draws upon the film, tending to pull it past the exposure opening. In order to secure the necessary intermittent action of the film at the exposure window, an intermittently acting pressure device, L, L₂, is provided with means to press the film against the casing K, at proper intervals, and hold the film against movement. Should no protection be afforded to the film between this clamping device and the take-

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up reel, B, the action of that reel in pulling upon the film would tend to rupture the film; but there has been provided a flexible spring arm, N, which will be deflected under the pull of the reel, B, when the film is held against movement at the exposure window, and the winding up operation is thus permitted without damage or danger to the film. At the same time, as soon as the pressure of the device, L-2, is released and the film is free, the resiliency of the spring arm, N, will tend to snap, or jerk the film upward the necessary distance to expose a fresh section of film for photographic or exposure purposes.

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It is thus seen that in this Marey French patent of 1893, there are the reels for holding the bulk of the film before and after exposure, the provision of constantly operating devices, one of which is entirely independent of the delivery reel, and also means for automatically moving the film forward past the exposure window, the pull of that feed being upon a loop of slack film rather than upon the bulk of the film, with its heavy weight, as carried by the delivery reel, a.

It is thus to be noted that in the Marey French patent of 1890, the art is taught that the film may be fed to the take-up reel by a pair of continuously operating feed devices, whereas the Marey French patent of 1893 teaches the art that the film may be also fed forward from the delivery reel by a pair of continuously operating feed devices. In both of these patents there is a provision of a loop of slack film against which the pull of the intermittent feed device is brought to bear so that the film is protected against rupture.

It is also to be noted that Fig. 6 of this Marey French patent shows a shutter with three wings.

The protection of the film against tearing is thus stated in the specification:

"From thence the film travels upon the flexible blade N, fixed to the pillar n; the purpose of this flexible blade is to give a certain amount of play to the film, so that it cannot tear under the action of the traction caused by the receiving column which turns when the fixing device maintains the column during the posing time. In fact, if this flexible blade did not exist, it is obvious that the film being maintained at D-2, and drawn through the rotation of the receiving coil B, would tear at each picture."

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Mr. Jeffery: I offer in evidence the diagram of the Marey French patent of 1893.

Marked Defendants' Exhibit No. 20.

Mr. Church: I object to it as not being a correct representation of the mechanism of the patent.

Q17. In your opinion is the diagram, Defendants' Exhibit No. 20, a correct diagrammatic representation of the device set forth in the said Marey patent of 1893? A. Yes.

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Mr. Jeffery: I offer in evidence the Edison patent No. 491,993, dated February 21, 1893.

Marked Defendants' Exhibit 21.

Mr. Jeffery: This patent is introduced for the purpose of showing the state of the art.

I also offer in evidence the patent to Edison, No. 493,426, dated March 14, 1893.

Marked Defendants' Exhibit 22.

Mr. Jeffery: I also offer in evidence the patent to Edison, No. 589,168, dated August 31, 1897.

Marked Defendants' Exhibit 23.

Mr. Church: These are both, I think, pleaded.

Mr. Jeffery: Those are both pleaded, I believe.

Q18. Have you read and do you understand the Edison patents Nos. 491,993, 493,426 and 589,168?

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A. Yes.

Q19. Will you please describe and explain as briefly as may be possible the device shown in the specification and drawings of the three Edison patents, Defendants' Exhibits Nos. 21, 22 and 23, so far as they may have any relevancy to, or any bearing on the Latham patent in suit? A. For convenience I refer first to Edison patent 493,426, which is for apparatus for exhibiting photographs of moving objects. Two methods of exhibiting moving pictures are disclosed in this patent, one being by means of a so-called "peephole machine" or kinetoscope and the other being the projection of the image upon a screen in the usual manner of projectors. The pictures to be exhibited are formed upon a long and continuous strip of photographic film in the usual and well-known manner. The character of the film is said in this patent to be as set forth in the Edison application, Serial No. 403,534, which, as a matter of fact, resulted in the other Edison patent in the question, No. 589,168. In other words, the film may be a film with perforated edges, and, as a matter of fact, such perforations are diagrammatically expressed in Fig. 1 of this Edison patent, No. 493,426. At the same

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time, I do not understand that this patent is limited to a film with perforated edges, but that it was contemplated that a film with plain edges may be also employed. The specification of the Edison patent, No. 493,426, also refers to the Edison application, Serial No. 403,535, which, as a matter of fact, is an application upon which was based the third Edison patent, referred to in question, No. 491,993. The Edison patent, 493,426 has this to say as to the means for moving this film (see page 1, line 98) :

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"The means for advancing the film and for operating the shutter to expose the pictures may be the same in all particulars as in the apparatus for taking pictures described in my application, Serial No. 403,535, filed August 24th, 1891."

If reference be made to this Edison patent 491,993, Serial No. 403,535, it will be seen that such patent contemplates the employment of an intermittent sprocket wheel, 19, for co-operation with the spaced holes in the sides of the film, for feeding the film forward.

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If reference be made to the Edison patent 589,168, it will be seen that the movement of the tape-film may be continuous or intermittent, but that the intermittent movement of the film is preferable, and that it is also preferable that the periods of rest of the film shall be longer than the periods of movement (see page 1, line 33). This patent describes and illustrates the film with its evenly spaced perforation 4, in Fig. 7, of its drawings. The specification of patent 589,168 indicates at line 44, page 1, that the patentee had

"been able to take, with a single camera and a tape-film, as many as forty-six photographs

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per second, each having a size measured lengthwise of the tape of one inch, and I have also been able to hold the tape at rest for nine-tenths of the time."

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In other words, Mr. Edison asserts that with the apparatus of this patent he had been actually able to attain not only a very high rate of exposure of forty-six per second, but that he was able to do this with a period of movement, only one-tenth of the total elapsed time. It is thus to be seen that Mr. Edison contributed to the art the definite idea that either of two forms of film, or either of two forms of feeding mechanism, might be employed in photographic cameras or photographic projectors or photographic kinetoscopes. In other words, if one uses plain film one may use therewith a friction feed. On the other hand, if one employs a film with perforated edges, one may use therewith a sprocket feed. The art was definitely instructed that the selection of one form of feed or the other form of feed was merely a matter of choice on the part of the user and a matter of preference.

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Mr. Jeffery: I offer in evidence the patent to Mayer No. 525,991 of 1894. This patent is offered for the purpose of showing the prior state of the art.

Marked Defendants' Exhibit 24.

Q20. Have you read and do you understand this Mayer patent Defendants' Exhibit No. 24? A. Yes.

Q21. Please explain the apparatus shown and described in the drawings and specifications of that patent, Defendants' Exhibit 24. A. Without going into the details of the device, it may be sufficient to

state that this Mayer patent shows a means for continuously supplying the film to a slack loop against which the pull of an intermittent feed device would be brought to bear. In the patent drawings the continuously operative feed device is the reel, A, driven from the main shaft, while the intermittently acting device is the reel, B, giving intermittent movement by a reciprocating frame, co-operating with teeth of the reel. The loop of slack film is clearly indicated as present in connection with the reel, A, and as to this the specification says, line 24, page 2:

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"The latter, moreover is connected by gearings with reel, A, in order to unwind the sensitized paper somewhat more rapidly than the same is wound on reel B, in order to prevent tearing."

Mr. Jeffery: I offer in evidence the patent to Gray, No. 540,545, dated June 4, 1895.

Marked Defendants' Exhibit 25.

Q22. Have you read and examined and do you understand the Gray patent Defendants' Exhibit No. 25? A. Yes.

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Q23. Please explain and describe the device which is shown in the drawings and specifications of this patent, Defendants' Exhibit No. 25. A. While this Gray patent, 540,545 is entitled, "Series Photographic Camera," it definitely shows the application of the apparatus to projecting purposes as well as to the taking of photographs. In either case, a single lens is used and photographs are taken upon a film of double width; that is, the film is sufficiently wide to accommodate two pictures side by side, only one of which is used at a time for projecting purposes. The mechanism is

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such as to permit movements only half as fast as would be required if the film was of single width only. The parts are so assembled as to arrange for the projection of a picture first from one side of the film and then from the other side of the film. In order that there may be proper correlation of these pictures with the time of exposure, a mirror is interposed in the optical axis and arranged at such an angle as to utilize a picture lying in a plane at right angles to the optical axis at one time and then (the mirror being rotatable and covering but half of a circle) permitting the light to pass through the opening in the mirror frame to another portion of the film in the direct line of the optical axis. In order that first one side of the film may be utilized and then the other, means are provided for shifting the film transversely across the photographic box in its course from one position to another.

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It is to be noted that the bulk of the film before exposure (I^1) is carried upon a roller, the shaft of which is movable in the slot of a carrying frame, and this roller is definitely pressed to the left by a suitable spring q^1 . At the same time, the bulk of the film, after exposure (J) is carried upon a roller similarly mounted and actuated by the spring q .

In frictional contact with the film, J^1 is a positively driven frictional feed roller, n^1 which tends to unroll the film J^1 and form a loop of slack film. Against this loop of slack film is brought to bear the intermittent pull of a toothed feeding device r which engages with evenly spaced holes in the edges of the film. It is thus seen that the continuous feed device n^1 forms a supply of slack film, and that an intermittently acting device falls upon this loop

of slack film and forms a second loop of slack film. Against this second loop of slack film is brought to bear the action of a second intermittently operating feeding device *v*, which intermittently pulls the film upward and supplies it (through the slack section) to the continuously operating feed device *n* which is in frictional contact with the surface of the roll of film *J*.

It is to be noted that the instruction of the patent is that when used as a projector, two sources of light shall be employed, these being arc lamps, so arranged with reference to the revolving mirror and the optical axis as to permit first one and then the other to become effective in throwing light upon the screen, and in this manner utilizing the positive picture first on one side of the intermittently moving film and then upon the other.

Fig. 2 of the Gray patent indicates the transference of the wide film from one side of the photographic box to the other, and also illustrates the fact that the first intermittently acting device pulls upon the film when it is in one position or plane with reference to the optical axis, while the other intermittent feed device moves it when it is in another plane with reference to such axis.

The operation of the intermittent feed is indicated at line 55, page 2, of the specification:

"To the shafts *s*, *s*¹, are secured cranks *u*, *u*¹ operatively connected with rods *v*, *v*¹ which are supported at their free ends, the ends of the tines of the fork being bent at right angles and beveled, to form hooks, *w*, for engagement with the film *d* which is provided at its upper and lower edges with perforations *x* for receiving the hooks *w*, at the ends of the forks.

The forked rods, v , v^1 are arranged to act on the portions of the film held by the guides C, C¹, and are pressed forward against the film by springs y , secured to a fixed portion of the apparatus. The hooks w are thus arranged to reciprocate in planes at right angles. They are also geared so as to work in alternation."

The use of the two lights with the apparatus, when used as a projector, is indicated at line 93, page 2. A reference to the moving of the two portions of the film in alternation along the two focal planes by a step by step movement, is also referred to at line 41, page 1, and is described in detail later on in the specification. It seems unnecessary to quote those portions.

It is thus seen that the Gray patent discloses the use of a perforated film which is intermittently and positively moved forward by an intermittent toothed feed mechanism; that the pull of the intermittent feed is brought to bear upon a loop of slack film, formed by the continuous feeding of the film from the delivery roll; also that the intermittent feeding device produces slack loops of film, which in turn are taken up by the continuously operating feeding mechanism n in feeding the film to the take-up roll I.

In this connection I have had prepared a dia-grammatic expression of the apparatus of this Gray patent 540,545, in which I have shown for purposes of simplicity only one of the intermittent feed devices w . This diagram shows the delivery roll of film I' from which the film is fed by the continuously operating feed mechanism n^1 , to form a loop of slack film; the intermittently acting toothed feed device w acts upon holes in the film,

and pulls against the loop of slack film above mentioned, and draws the film past the optical axis of the apparatus; in doing this it forms a second loop of slack film, which is drawn against by the continuously acting feed device *n*, feeding the film to the take-up roll or bulk of exposed film.

Mr. Jeffery: I offer in evidence the drawing of the Gray patent No. 540,545, produced by the witness.

Marked Defendants' Exhibit 26.

Mr. Church: I object to it as an incorrect representation of the mechanism of the Gray patent.

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Q24. In your opinion, is Defendants' Exhibit No. 26 a correct diagrammatic representation of the mechanism shown and described in the said Gray patent? A. Yes.

Q25. Mr. Hammer, have you carefully examined the record in the suit of the Motion Picture Patents Company against the Independent Moving Picture Company of America on this Latham patent in suit, No. 707,934? A. Yes.

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Q26. Are you able to describe the intermittent movement of the defendants' camera, which was alleged in that suit to be an infringement? A. Yes.

Q27. How did that device for intermittent movement in that camera compare with the device *w* of the drawing of the Gray patent, Defendants' Exhibit 26? A. It was very similar; as a matter of fact they were almost identical. In the defendants' camera of that former suit (known as the Warwick camera), there was a reciprocating fork with two teeth or prongs substantially like the device *w*, of

the Gray patent, this fork being upwardly moved and downwardly drawn by a suitable cam mechanism, and in the course of that movement, reaching up and taking hold of holes in the side of the film that was being exposed, and intermittently drawing that film down past the exposure window in a manner similar to that illustrated and described in the Gray patent.

It is stipulated by counsel for the respective parties that the Edison patent No. 589,168, being Defendants' Exhibit No. 23, was applied for by filing the application in the Patent Office on August 24, 1891.

Adjourned to to-morrow, December 23rd, 1915,
at 10:00 A. M.

New York, Thursday, December 23, 1915,
10:30 A. M.

Trial resumed.

Mr. Jeffery: I offer in evidence the French patent to Joly No. 249,875, dated August 26, 1895.

Marked Defendants' Exhibit 27.

I also offer in evidence a translation of the said Joly patent.

Marked Defendants' Exhibit 28.

I also offer in evidence United States Letters Patent No. 569,875 to said Joly, dated October 20, 1896.

Marked Defendants' Exhibit 29.

EDWIN A. HAMMER resumes the stand.

Direct Examination by Mr. Jeffery (continued) :

Q28. Have you read and do you understand the French and United States Letters Patent to A. M. Joly which have just been offered in evidence? A. Yes.

Q29. Please explain and describe the devices shown in the said French Patent to Joly, No. 249,875 and also that shown in the said United States Patent to Joly, No. 569,875, so far as the said United States Patent may be pertinent or may assist in your explanation of the French patent. A. The Joly machine is one which is shown in the two patents referred to as a camera, although it is also said to be adapted for use in making animated projections. For example, the specification of the French patent says: "The film unwinds, as I have explained above, and by placing behind the apparatus a sufficient source of light equipped with a reflector and a condenser the picture which is on the film can be thrown on the screen."

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The apparatus is one in which two reels are provided, one of which is adapted to support the bulk of the film before exposure, and the other of which is adapted to support the bulk of the film after exposure; the former is lettered J in the drawings and the latter R. The film is fed from the delivery reel through the action of a continuously operating sprocket roller H, the teeth of which engage with spaced holes in the edges of the film in the manner indicated and set forth in the Edison patent to which reference has already been

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made. This construction is indicated in the French specification where it says:

"On the shaft of the wheel G is mounted a roller H, fitted with two circumferential rows of teeth which fit into the holes provided all along the edges of the film I."

This first continuous feeding sprocket is positively driven through appropriate gearing as indicated by the specification where it says:

"The shaft E carries a pinion F, which controls the gear wheel G through the agency of the gear wheels G¹ and G-2."

The specification provides that after leaving the first continuous sprocket feed device the film shall originally have been made into a loop of slack film before being placed back of the exposure window, so that the intermittent pull upon the film shall not be brought to bear upon the delivery wheel J, with its heavy weight of film, but upon the loop of slack film thus formed; it also indicates that in the normal operation of the apparatus this loop of slack film upon which the intermittent feed works is maintained. For example the specification says:

"Before beginning the operation at the time when the film is on the apparatus a loop is formed by hand between the roller H and the rollers K and K¹. As the amount of film which winds upon the spool R is equal to that which unwinds from the spool J, this loop will remain the same during the whole time that the apparatus is in operation. It

"follows that since the roller P does not touch "the taut film, the latter is not in danger of "tearing."

Adjacent to the lower or take-up reel R of the Joly apparatus is a second continuously operating sprocket feed mechanism P, similar to the feeding mechanism H above described. The Joly apparatus states that this roller P is a toothed roller and that it is positively driven through appropriate gears. For example,

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"From this frame the film passes between "two rollers OO¹ over the toothed roller P, over "the roller Q, and is wound up on the spool R. "The shaft E carries a pinion S which, by "means of the wheel S¹ drives the wheel T "mounted on the shaft with the roller P."

It is thus seen that there is a continuous sprocket feed mechanism for drawing the film from the delivery wheel J and a second continuously operating and positively driven sprocket feed mechanism for supplying the film to the take-up reel. One sprocket feed supplying the film to the take-up reel at the same rate at which the other is drawing it from the delivery reel.

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Intermediate the two continuously operating sprocket wheels is an intermittent feed device comprising a frame N, which oscillates about a pivot and at intervals presses against the film and forces the film down past the exposure window, this movement or effort upon the film being imposed upon the loop of slack film above the exposure window and not upon the bulk of the film which is carried by the delivery reel J..

Co-ordinated with this intermittent feed mechanism is a stop device e which at appropriate times

presses against the film so as to definitely interrupt the passage of the film by the exposure window. As the specification says, "When the film is stopped one of the openings provided in the shutter presents itself between the dark room and the objective, the film then receives an impression at the moment when it is stopped."

It is thus seen that when the stop device *e* is drawn back from the film so as to leave it free the intermittent feed device will be pressed against the film and some of the loop of slack film near the continuous feed device *H* will be drawn down past the exposure window.

In this way a second loop of slack is formed at the intermittent feed device and it is upon this loose film that the continuous feed device *P* draws in continuing the feeding of the film to the take-up reel *R* while the film is at rest before the exposure window.

As the specification of the French patent says:

"As the shaft *E* continues to rotate the frame *N* will move back again. The loop it had formed on moving forward will no longer be stretched, and the roller *P* will be enabled to let down the film forming such loop."

As indicating the disclosure by the Joly French patent and the relief of strain upon the film due to the formation of the loops of slack in spite of the material weight and inertia of the long films which are employed the specification says:

"Owing to the system which controls the movement of the film, films of very great length and consequently great weight may be used. The frame *N* which produces a

"movement of the film need not act directly on the spool since there is always a certain length of film unwound beforehand. This frame, therefore, need not itself cause the rotation of the spool."

In order to illustrate in the simplest possible way the general course of the film in its passage through the Joly apparatus I have had prepared, and now produce a diagrammatic expression of such apparatus. On this diagram the two spools upon which the bulk of the film is mounted are indicated at J for the delivery spool and at R for the take-up spool. It will be seen that in leaving the delivery spool, or reel J, the film passes around the continuously operating sprocket feed mechanism H, which draws the film from the spool J and in that manner maintains the loop of slack film shown on the diagram. The film then passes by the exposure window L and by the stop device e, which is effective in arresting the movement of the film in the manner already indicated. From the exposure window the film passes by the idler rollers M and O, between which oscillates the frame or intermittent feed mechanism indicated at N. As seen on the diagram the righthand and lefthand movement of this device N tends to force out the film at this point into a second loop. Below the intermittent feed device is the second continuously operating sprocket feed mechanism P which draws upon the loop of slack film formed by the intermittent feed device and feeds such film continuously and regularly to the take-up reel R.

From this description it will be seen that the Joly French patent discloses a projector or a camera mechanism in which the film is arrested at

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the moment of exposure and in which the interval of rest is greater than the interval of movement. It also appears that the Joly apparatus embraces positively driven continuously operating sprocket feed mechanisms H and P for drawing the film steadily, regularly and continuously from the delivery reel J and delivering it continuously and regularly to the take-up reel R; there is also the intermittently acting feed mechanism interpolated between the two continuous feed mechanisms and at one side of the exposure window, for drawing upon the loop of slack film formed by the first of the continuously operating sprocket feed mechanisms and forming a second loop of slack upon which the second continuously operating sprocket feed mechanism P draws film for supplying to the take-up reel R.

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These are the features which are disclosed in the Latham patent in suit, the only variation being the use of one form of intermittent feed mechanism for another form of intermittent feed mechanism well known at the time of the application for the French patent and the application for the patent in suit, and long before the latter date.

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On this diagram, as on all of the similar diagrams which I have had prepared and which have been produced in the course of this deposition, I have placed reference numerals at the side of the reference letters of the several patents discussed, these reference numerals being placed in parentheses and serving to identify the particular features referred to on these diagrams, with corresponding parts or features of the drawings of the Latham patent in suit.

Q30. In your opinion is the diagram you have referred to of the Joly patent a correct diagram-

matic representation of the devices described and shown in said patent? A. Yes.

Mr. Jeffery: I offer the diagram of the Joly French patent No. 249,875 and United States patent No. 569,875 in evidence.

Marked Defendants' Exhibit 30.

Mr. Church: Objected to by counsel for the complainant as not a correct representation of the mechanism of the Joly patent.

Mr. Jeffery: I offer in evidence the United States Letters Patent to Armat, No. 673,992, dated May 14, 1901.

Marked Defendants' Exhibit 31.

It is stipulated that the application for the said Armat patent was filed in the United States Patent Office on February 19, 1896.

Q31. Have you read and do you understand and have you examined the nature of the device or devices shown and described in the said Armat patent No. 673,992? A. Yes.

Q32. Please describe and explain the said devices shown in said patent. A. Armat's patent referred to in the question is specifically for a projector device for exhibiting moving pictures. It provides for the use of a long and consequently heavy film, or strip, for the pictures and also provides two reels Q and Q¹ one of which is designed to support the bulk of the film before exposure, while the other is designed to support the bulk of the film after exposure.

The apparatus also embraces a continuously operating sprocket feed mechanism E for drawing the film steadily and uniformly and continuously

from the delivery reel Q and also a continuously operating sprocket feed mechanism for feeding the film at the same rate to the take-up reel Q¹. Between these two continuously operating sprocket feed mechanisms is the exposure window and also a positively driven intermittently acting feeding mechanism for drawing the film past the exposure window at appropriate times.

It will be seen that the apparatus is so designed as to supply a loop of slack film between the exposure window and the first continuously operating sprocket feed mechanism E, so that the action of the intermittent feed will be upon this loop of slack film rather than upon the taut film or upon the bulk of the film carried by the supporting or delivery reel Q. Of course, the intermittent operation of the intermittently acting device H is designed and will result in the formation of a second loop of slack film upon which the second continuously operating sprocket feed mechanism E-2 draws for its supply of film. In this manner the film is protected against injury in passing through the apparatus.

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One of the objects of the Armat invention is stated at page 1, line 26, as follows:

"Another object is to provide means by
"which a continuous or endless strip of film
"forming the picture carrying surface may be
"operated so as to successively place the ob-
"jects thereon in position for reproduction
"without liability to injury from unnecessary
"strain or wear thereon, and without the
"knocking and jarring of the mechanism which
"is incident to the means heretofore proposed."

Attention is called to the fact that a continuous film is to be differentiated from an endless strip of film, the Armat patent showing how either may be utilized.

Another object of the Armat patent is said to be (page 1, line 39) :

“For intermittently releasing the film so as to permit it to move a sufficient distance to expose a picture at each successive movement and also to provide continuously operated mechanism for moving the film, and means for intermittently moving it so as to successively place the pictures in the field of illumination for reproduction.”

The Armat patent calls attention to the fact that one of the shortcomings in every apparatus known has been in the employment of shutters having but a small opening so that the period of darkness much exceeds the period of illumination, the consequence being that the extended dark period makes a very marked impression upon the eye and there is a very material flicker of the picture, with the marked diminution in illumination of the screen resulting. He says at page 2, line 30 :

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“In the case of my invention the conditions are quite different, and the results produced are therefore more satisfactory than and superior to anything of the kind heretofore obtained, for the reason that the picture is held a much longer time than is required to remove it and substitute another in its stead, thus prolonging the period of view or illumination very greatly as compared with the period of interruption or change * * *.”

He says further relative to this matter on page 2, line 64:

"This I accomplish by moving the film or
"other picture-carrying surface intermittently
"in such manner that the interval of exposure
"and illumination of the picture shall exceed
"the interval of time required to effect the
"change * * *."

359 That the continuously operating feed mechanisms are provided with teeth is indicated in the specification at page 3, line 11, as follows:

"The drums or spools E and E-2 are prefer-
"ably provided with peripheral teeth or pro-
"jections adapted to engage perforations in
"the film so as to properly guide and hold it
"against slipping."

That these continuously operating feed mechanisms are positively driven is indicated by the sentence next to the one above quoted:

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"These spools may have their shafts jour-
"naled in any suitable support or standard
"and may be geared together by a sprocket
"chain or otherwise, so as to rotate in unison,
"being so timed that each spool will rotate
"the same number of times in the same space
"of time."

That the operation of the continuously operating sprocket feed mechanism A furnishes a loop of slack film is indicated in the specification page 3, line 31, as follows:

"Owing to its rigidity or stiffness the film
"D will be caused to be moved or be carried

"upwardly or outwardly a short distance away from the drum E and its point of contact with the spring E⁴, so as to provide constant slack in the film at this point, and then with a return bend it may pass in a substantially straight line through the tension and guiding device E¹ and thence to the drum E-2."

The correlation between the continuously moving feeding devices and the intermittently moving feeding devices is indicated in the specification page 5, line 7, as follows:

"This operation will be repeated in regular sequence, the film being caused to move over the surface of the drums E and E-2 continuously, while that portion thereof which lies between the two drums is intermittently moved forward just far enough to expose a picture at each move, the film advancing mechanism being also continuously driven, but adapted to only intermittently advance the film, the interval of illumination of the picture being made to exceed the interval of movement or change preferably very greatly or in the ratio of about 1 to 10."

In concluding his general description of the operation of the apparatus described, the patentee says at page 5, line 29:

"I thus provide means for operating the film so that it may be moved the proper distance for exposing successive pictures without liability to injury thereto, and whereby the knocking and jolting of machinery incident to the necessarily rapid movement of the parts may be effectually prevented."

It may be noted that in connection with the continuous feed mechanisms and the intermittent feed mechanism, the patentee provides a stop device or pressure device which is brought to bear against the film at the time the exposure of the film is to be made, thus arresting the movement of the film. This feature is indicated at line 21 of page 3 of the specification.

It is to be noted that while Armat discloses continuously operating sprocket feed mechanisms, his preferred method for securing intermittent movement of the film was through the use of a "beater" device rather than a toothed device, because he specifically wished to avoid at that point the additional strain which would be brought upon the holes in the film if he employed teeth on that feature of his apparatus. His specification indicates a full knowledge of the use of a toothed intermittent feeding device and his preference for some other, though equivalent form, for such a means for securing intermittent movement of the film. I call attention particularly to that portion of the specification found on page 4 beginning at line 29:

"This roller is preferably provided with a suitable covering and may have reduced ends, as shown in Fig. 8 so that it may engage the surface of the film between the perforations in order to prevent enlarging or otherwise distorting the perforations."

He says in order to prevent enlarging or otherwise distorting the perforations.

In other words, to avoid the use of a form of intermittent feed mechanism with which he was familiar Armat deliberately reduced the ends of

the intermittent feed rollers so that the effect of the rollers was brought to bear upon the surface of the film between the perforations rather than upon the perforations themselves which would have been the case had he employed teeth on those rollers for securing the intermittent movement.

Fig. 13 of the Armat patent shows the general arrangement of apparatus suggested for use when the film is a long strip or band instead of an endless strip.

In order to indicate with clearness the general course of the film through the apparatus of the Armat patent I have had prepared, and now produce, a diagrammatic expression of such apparatus and its general action upon the film. In this diagram it will be seen that reels Q and Q¹ are provided, one for maintaining the bulk of the film before exposure, while the other supports the bulk of the film after exposure. On this diagram the general course of the film is upwards and it will be seen that there is a continuously operated sprocket mechanism E, which continuously and regularly and uniformly draws the film from the supply reel Q and serves to form a loop of slack film. It also indicates at the upper part of the diagram that there is a continuously operating sprocket feed mechanism E-2, which serves to supply film to the take-up reel Q¹ regularly and uniformly and steadily. Between these two continuously operating sprocket feed mechanisms is an intermittent feed mechanism H designed to move the film past the exposure window f4 at appropriate times.

A stop device E¹ is also indicated for holding the film at the exposure window under sufficient friction so that the intermittent feed device H will

only draw a predetermined amount of slack past the exposure window for purposes of exhibition.

On this diagram I have also indicated reference numerals which correspond to those parts of the apparatus of the patent in suit to which the Armat devices bear relationship.

It is thus clear that the Armat patent certainly shows and teaches everything that is shown and taught by the Latham patent in suit, including the possibility of the use of a sprocket feeding device for the intermittent feed, though there is indicated also the preference for a device which does not have teeth so as to avoid the additional wear upon the holes of the film which would follow the use of teeth at such a time and place.

Q33. In your opinion is this diagram of the Armat patent which you have produced a correct diagrammatic representation of the devices shown and described in that patent? A. Yes.

Mr. Jeffery: I offer in evidence the diagram of the Armat patent No. 673,992 produced by the witness.

Marked Defendants' Exhibit 32.

Mr. Church: I object to that as not a faithful representation of the mechanism of the Armat patent.

Mr. Jeffery: I offer in evidence the Casler patent No. 666,495.

Marked Defendants' Exhibit 33.

It is stipulated that the application for the said Casler patent was filed in the United States Patent Office on February 26th, 1896.

It is further stipulated that the application for the said Casler patent No. 666,495, Defendants' Exhibit 33, was placed in interference with Messrs. Armat and Latham,

said interference proceeding being the one which has been heretofore referred to.

Mr. Jeffery: I offer in evidence the patent to Latham No. 600,113 dated March 1st, 1898.

Marked Defendants' Exhibit 34.

This patent is offered for the purpose of showing some statements of Latham therein contained and not as an anticipation.

Mr. Church: That is objected to as incompetent. The statements of the said Latham patent can have no effect upon the interpretation of the patent granted to him on a previously made application.

Mr. Jeffery: Pursuant to a stipulation entered into between counsel for the respective parties dated July 16th, 1915, by virtue of which it is agreed that certain depositions taken in the suit of the Motion Picture Patents Company against the Independent Moving Pictures Company of America heretofore tried in this Court may be offered in evidence with the same force and effect as if they had been given in this case, along with the exhibits thereto produced and subject to objections as if here offered for the first time, I produce and offer in evidence a printed book containing the depositions of certain witnesses named in the index printed in the front of said book and also containing certain exhibits listed in said index.

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I introduce this book at this time because some of the depositions which it contains relate to the manufacture and use prior to the application for the patent in suit of a camera known as the Chinnock Camera.

I now place this printed book on the record without reading the depositions in full to the Court, it being agreed that that course may also be taken with respect to the depositions which may be offered by the complainant subject to the said stipulation.

As part of the defendants' proof of the existence of the Chinnock Camera at the dates referred to in the testimony I offer the Chinnock agreement of May 25th, 1895, in evidence.

Marked Defendants' Exhibit 35.

I also offer in evidence agreement between Chinnock and Hough and Werner dated May 3rd, 1895.

Marked Defendants' Exhibit 36.

I also offer in evidence the Hough letter of January 15th, 1895.

Marked Defendants' Exhibit 37.

I offer also in evidence the certificate of incorporation of the Maltby Manufacturing Company dated August 28th, 1895.

Marked Defendants' Exhibit 38.

I also offer in evidence the affidavit of Joseph F. McCoy dated May 5th, 1911.

Marked Defendants' Exhibit 39.

I also offer in evidence the Chinnock Camera referred to in the testimony of the witnesses whose testimony is printed in this said volume.

Marked Defendants' Exhibit 40.

I also offer in evidence five photographs of the said Chinnock Camera.

Marked Defendants' Exhibit 41-A, 41-B, 41-C, 41-D and 41-E.

I also offer in evidence the receipt book of the American Kinetoscope Company re-

ferred to in said depositions printed in said volume.

Marked Defendants' Exhibit 42.

Q34. Please describe the Chinnock Camera, Defendants' Exhibit 40? A. The mechanism of this exhibit comprises two reels, one to support the bulk of the film before exposure and the other for supporting the bulk of the film after exposure, together with feeding devices for drawing the film continuously from the supply reel, means for intermittently moving the film past the exposure window, and means for taking up the film and winding it upon the take-up reel.

The various operative parts are positively connected through suitable gearing so as to be operative from a single drive shaft.

The film itself is about two inches in width and is unperforated, and the feeding mechanisms therefore are adapted to move the film forward by frictional contact therewith.

The film is drawn from the supply reel at a uniform rate and through the continuous rotation of the feeding mechanism, and in this way forms a loop of slack on which the intermittent feed mechanism draws. As a consequence of this construction the film is relieved from strain and tearing or rupturing the film is obviated because the pull is not upon a large mass of film having considerable weight and inertia but upon a short section of slack film. In other words, the Chinnock Camera provides against the breaking of its film or strip of delicate material in a manner comparable with that employed in the prior printing press art to which attention has been called and in which the same problem was presented.

After leaving the continuous feed mechanism the film passes by the exposure window and past a stop mechanism which is designed to press against the film at appropriate intervals and hold it against forward movement when it is desired that the film shall be arrested for purposes of exposure.

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This stop device is arranged to act synchronously with the intermittent feed rollers so as to secure the desired intermittent forward movement of the film. It is to be noted that the rollers for feeding the film past the exposure window rotate continuously and are of larger diameter than the continuous feed rollers and therefore have a greater peripheral speed; their use with the intermittently actuated stop device however prevents these rollers from actually forcing the film forward continuously, there being a slippage provided for at this point when the stop mechanism is acting to arrest the forward movement of the film.

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The rollers are cut away at their central portions so as to relieve the film of wear at the part where the picture has been taken, the friction being exerted in all of the rollers at the edges of the film.

In connection with the intermittent feed mechanism there is a supplementary device in the form of a pivoted frame which acts to draw down upon the film when it is released by the automatic stop device and form or take up the slack which is fed forward by the intermittent feed mechanism. The take-up reel is driven by belt from the main mechanism of the apparatus and draws directly upon the loop of slack film formed by the intermittent feed mechanism and its supplementary hinged frame.

In order to illustrate clearly the general course of the film through the Chinnock camera and the

general relationship of the parts I have had prepared and now produce a diagram illustrating these features.

On this diagram I have placed letters of reference similar to those found on the drawing of the patent in suit and relating to the same general features. In this diagram the course of the film is downward and is shown as being drawn from the delivery reel 22 by the continuously operated and positively driven feed device 39 forming the first loop of slack 21a. From this point the film passes by the exposure window 56 and the stop devices *a c* and between the feed rollers *d*. On the shaft with the right hand roller D is a cam *b* which serves to intermittently release the stop mechanism *a c*. From this intermittent feed mechanism the film passes around the spring controlled frame 46 and forms in this way the second slack in the film which is fed by the intermittent feed mechanism and thence the film is taken by the take-up reel 24.

It is thus seen that in the Chinnock camera, the same general problem was faced and solved that was faced by the patentee of the patent in suit, and the solution is the same in that it provides a continuous feeding of the film from the supply reel for the release of strain at that point and the formation of a loop of slack film which is drawn upon by the intermittent feed mechanism, the latter forming a second loop of slack film upon which the draft is made in supplying the film to the take-up reel.

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Mr. Jeffery: I offer in evidence the diagram of the Chinnock camera produced by the witness.

Marked Defendants' Exhibit 43.

Mr. Church: The diagram is objected to as an inaccurate representation of the mechanism of the Chinnock camera.

Q35. In your opinion, is that diagram, Defendants' Exhibit 43 an accurate and correct diagrammatic representation of the mechanism of the Chinnock camera? A. It is.

Q36. Have you examined the photographs of the Chinnock camera which have been offered in evidence? A. Yes.

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Q37. Did you examine the photographs of the Chinnock camera which were in the record of the suit of the Motion Picture Patents Company versus the Independent Film Manufacturing Company? A. Yes.

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It is stipulated that the photographs of the Chinnock machine, Defendants' Exhibits Nos. 41-A, 41-B, 41-C, 41-D, 41E are copies of the photographs of the Chinnock camera which were in evidence in the suit of the Motion Picture Patents Company versus Independent Film Manufacturing Company on the Latham patent in suit.

Q38. Do you find that any part of the Chinnock camera is missing on the Defendants' Exhibit 40, which has been introduced here this morning? If so, please describe what it is. A. Yes; I find that the transverse bar supporting the stop-pad *a* of my diagram, Defendants' Exhibit No. 43, is missing; this appearing, however, very clearly in the photographs, Defendants' Exhibits 41-A, 41-B and 41-C of the Chinnock camera, which are also in evidence.

Q39. Will you be kind enough to mark in ink on one of the said photographs in the printed volume which has been produced here and is part of the record in this case, the part of the machine which you have just described as missing, so that it may be clearly apparent on the record just what that is? A. The part I refer to is already marked with a white cross on Defendants' Exhibit No. 41-A, it being understood that this frame thus marked also includes the transverse bar from which it is supported.

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Mr. Jeffery: I offer in evidence a certified copy of the file wrapper and contents of the Latham patent in suit, No. 707,934.

Marked Defendants' Exhibit 44.

Q40. Mr. Hammer, you are familiar with the motion picture projecting machines which are widely used in this country, are you not? A. Yes.

Q41. And you have been for some time? A. Yes.

Q42. Will you please state whether on such machines the continuous positively driven sprocket which is shown in the Latham patent in suit is used to obtain accuracy of registration for practical commercial purposes? A. No, I should say that it was not. The fact is, as has already been testified by another witness, it is the practice in such projecting machines to have a supplementary device, known generally as a framing device, for securing the proper registration of the film with the exposure opening. The function of the continuously operating sprocket feed mechanism is to feed the film forward, hole by hole, or picture by picture, irrespective of the conditions of the perfor-

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rations and irrespective of repairs that may have been made in the film, or independent of the splices that are frequently found in such film, and in order to compensate for variations in the position of pictures with reference to the exposure opening, it is necessary and desirable that means may be employed for compensating for any variation for those or any other cases that may appear, and enable the operator to compensate for those variations during the actual exhibition of the pictures; and it is probably within the experience and observation of almost anyone who has ever attended an exhibition of moving pictures, that at times the pictures will be thrown on the screen out of proper relation to the exposure window; in other words, the pictures are not properly framed, and it will be observed that under those conditions, the operator will make an adjustment which restores the proper relationship between the picture and the frame within which it appears on the screen. This framing mechanism differs in different projecting machines, but is to be found on all of them, so far as I have observed, and is entirely distinct from the continuously operated sprocket feed mechanism to which reference has been made in the question, and secures the proper registration of the pictures independently of the continuous feeding of the picture.

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Q43. The Nicholas Power Company, in this city, is one of the largest manufacturers of projecting machines in this country, is it not? A. Yes.

Q44. Do you know whether or not Mr. Nicholas Power, the president of that company, has a patent on a framing device of the character you have just described? A. He has.

Q45. And is that used on the machines manufactured by the Nicholas Power Company? A. It is.

Q46. Was that patent in litigation, to your knowledge, against the C. R. Baird Company within the last year? A. It was.

Q47. And it was sustained by Judge Mayer in an opinion in this court? A. It was.

Q48. Do you remember the number of that patent? A. I do not.

Q49. Now, Mr. Hammer, assuming a motion picture machine to be similar to that described in the patent in suit, except that it is made for use as a camera, and has a shutter with two small peripheral openings; in your opinion could such a device be operated as a projecting machine? Please give your reasons for any opinion you may express on that point? A. It could not. It is wholly unadapted for such use. The reasons are quite plain. In such a camera as is contemplated by the question, it will be understood that the small shutter openings are designed and adapted to secure a practically instantaneous exposure of the object which is being photographed. This is essential in such a camera, because the moving object will have covered such a range of movement during a long exposure as to give a blurred photographic effect. In other words, in order to secure sharp definition in a photograph of an object in motion, it is necessary that the exposure period should be extremely short. Under such circumstances, the use of such a mechanism and such a shutter would absolutely preclude the possibility of the successful and commercial use of such a device for projecting purposes, irrespective of anything else.

Cross Examination by Mr. Church:

XQ50. Mr. Hammer, which of the structures of the prior art which you refer to in your testimony do you regard as the closest or nearest approximation in structure of the Latham patent in suit? 401 A. Without hesitation I should say that the closest approximation was found in the Armat patent, to which reference has been made, although that does not fully express a feeling which I have toward the disclosures of the art to a person skilled in the art at the time of the application of the Latham patent in suit.

XQ51. Assuming that the invention disclosed in the Armat patent shall be held not to have been prior in point of time to the invention of Latham as embodied in the patent in suit, what would you regard as the next closest approximation in the prior art to the Latham structure, disclosed in the patent in suit? A. In answering this question, I would like to have the date which counsel has in mind beyond which or forward of which I am supposed to consider this hypothetical situation.

402 XQ52. I think the question can be answered as it lies. A. I do not agree with counsel.

XQ53. Well, then, you cannot answer it? A. I cannot answer the question under those circumstances.

XQ54. Assuming that the Armat invention shall not be held to be a part of the prior art, and that the date of the Latham invention shall be held to be the date of the application of the Latham patent, namely, June 1st, 1896, what structure of the art prior to that date would you regard as the closest approximation of the Latham patent in suit? A. I do not see the ground for any

such assumption, inasmuch as the date of application of the Armat patent is prior to June 1st, 1896, the date of application for the Latham patent.

XQ55. Please answer my last question, eliminating from consideration the Armat patent? A. I think without any doubt that the Joly French patent, for example, shows substantially everything, and teaches substantially everything that is disclosed in the patent in suit, in view of the state of this art at the date of the patent, which is prior to the date of application for the patent in suit. The art was so full and so explicit and so well understood at that period that the general question of the equivalency of movement, the equivalency of devices, the equivalency and identity of results and general means provided for the securing of such result, makes the conclusion that I have stated inevitable in my mind.

XQ56. Assuming that the Latham invention shall be held to have anticipated the date of the Joly patent, what structure of the prior art would you consider the nearest approximation to the structure of the Latham patent? A. I would here repeat the inquiry and request for further information regarding the date beyond which my inquiry should extend.

XQ57. The date of the Joly patent, August 26th, 1895? A. I should say very definitely that the work of Gray, taken in the light of the state of the art and the date of the Gray application or Gray invention, was a full disclosure of means for the protection of a delicate strip of film or photographic material in passing through a photographic device adapted for use in connection with moving pictures.

XQ58. Is there any patent of the prior art to which you have referred that shows either a camera or a projecting machine embodying the following combination of distinct instrumentality, to wit, the combination with devices adapted to support the bulk of the flexible film and supply it for exposure and receive it after exposure, of positively driven toothed rotary devices located between and entirely disconnected from said supporting device and at opposite sides of the exposure window, said toothed devices being adapted to carry and feed the flexible film by engagement of their teeth, with equally spaced holes made in the edges of the film, and to respectively produce and take up slack in the film, and an intermittently acting rotary feeding device also provided with teeth, which engaged with the holes in the film, whereby the film is intermittently fed across the exposure opening?
A. Yes. It being understood that for the purposes of disclosure, a toothed intermittent feeding device is found in its equivalent form, as shown in the Armat patent.

Mr. Church: Answer objected to as irresponsible and question repeated.

XQ59. Can you not answer the question without qualification?

Mr. Jeffery: I want to enter my protest that this seems to be a violation of the rule of this Court as to the interpretation of claims.

A. My previous answer is direct and conclusive, to my mind, because the Armat patent not only

illustrates a device in which all of the features mentioned in the question are present with the exception of a toothed intermittent feed, but such patent discloses that toothed intermittent feeds are contemplated as among the possibilities and as equivalent structures, and are simply considered as of less practical advantage than a friction device or "beater," to accomplish the identical result, with less strain, than if teeth were employed.

XQ60. Please point out specifically in the Armat patent any statement to the effect that Armat ever contemplated the employment of an intermittently acting rotary feeding device provided with teeth, instead of the beater device that is shown? Please do not refer to something in the patent that does not answer my question, but something that does. A. I call attention to the portion of the Armat specification, already quoted by me in my direct testimony here, on page 4 and beginning at line 29, as follows:

"This roller is preferable with a suitable covering, and may have reduced ends as shown in Fig. 8, so that it may engage the surface of the film between the perforations in order to prevent enlarging or otherwise distorting the perforations."

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It is to be understood that at the time this statement was made by Mr. Armat, the toothed intermittent feed for films with spaced perforations at their lateral edges was well known, and had been in use for years.

XQ61. Have you now referred to the only description in the Armat patent of the use contemplated by him of a rotary toothed intermittent

feeding device? A. I should say that the Armat patent described in this statement is a device which he prefers to one having teeth for a similar purpose.

XQ62. Does not Armat in his patent show in Fig. 2, one form of beater device, and in Fig. 9 another form of beater device, and in Fig. 10 another form of beater device, and in Fig. 11 another form of beater device, making four forms of beater devices, that he contemplated using as his intermediate feeding mechanism? A. Yes. And all of those are adapted to engage the surface of the film between the perforations in order to avoid enlarging or otherwise distorting the perforations, and it is also to be noted that out of ten claims of the Armat patent which mention an intermittent feed, only one of them relates to any one of these specific devices to which the question calls attention. All of the other nine claims are couched broadly for "means," which would include not only the four specific devices which are illustrated in the patent drawings, but also such a form of intermittent feeding device as is illustrated and described, for example, in the Latham patent in suit.

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Mr. Church: All of the last portion of the witness's answer is objected to as irresponsible, and as composed of argumentative and volunteered statements.

Mr. Jeffery: I have no more questions of Mr. Hammer. I offer in evidence a certified copy of the decision of the Examiners in Chief of the United States Patent Office, dated October 17th, 1899, in the matter of Interference No. 18,461, between Latham, Casler and Armat.

Marked Defendants' Exhibit 45.

Mr. Jeffery: I also offer in evidence a certified copy of the decision of the Acting Commissioner of the United States Patent Office, dated February 5th, 1900, in said Interference proceeding.

Marked Defendants' Exhibit 46.

Mr. Jeffery: I also offer in evidence a certified copy of the opinion of the Court of Appeals of the District of Columbia on appeal from the said decision of the Commissioner of Patents in said Interference proceeding, No. 18,461, said decision being dated January 8th, 1901, as appears by the certificate affixed thereto.

Marked Defendants' Exhibit 47.

It is stipulated that the copies of the decisions, Exhibits Nos. 45, 46 and 47, which are printed in the book "Complainant's Stipulationated Depositions and Exhibits," hereafter to be produced by it on its behalf, are true and correct copies of said decisions.

Mr. Jeffery: I now also call attention to the depositions of the witnesses named in the index of the book of depositions in the suit of the Motion Picture Patents Company versus the Independent Motion Picture Company heretofore referred to, in connection with matters other than that of the Chinook camera, and in connection with those depositions I offer in evidence the following exhibits:

Baltimore Sun article, October 3, 1895.

Marked Defendants' Exhibit 48.

Mr. Jeffery: Dyer Interview in Show World, of April 4, 1908.

Marked Defendants' Exhibit 49.

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Stipulation.

IN THE

DISTRICT COURT OF THE UNITED STATES

FOR THE SOUTHERN DISTRICT OF NEW YORK

MOTION PICTURE PATENTS COMPANY.

419

Complainant,

In Equity
No. 12-194.
On Latham
Patent No.
707,934.

**UNIVERSAL FILM MANUFACTURING
Co., et al.,
Defendants.**

STIPULATION.

IT IS STIPULATED AND AGREED by and between the parties hereto that either party may, at the trial of this cause, read into the record any portions of any depositions taken in the suit of Motion Picture Patents Company vs. Independent Moving Pictures Company of America, heretofore tried in the U. S. District Court, Southern District of New York, Equity No. 5-167, including the exhibits referred to in such portions, and the exhibits offered at pages 629 and 630 of the record on appeal in said suit, with the same force and effect as if such depositions had been given and such exhibits produced in this cause, provided, however, that

this stipulation does not extend to the testimony of the witnesses Main, Waterman, Armat, Lowe, Freeman and Smith, nor to the depositions of Otway Latham and Gray Latham in an interference proceeding before the United States Patent Office, entitled Latham vs. Casler vs. Armat, which were offered in evidence at page 220 of said record on appeal.

IT IS ALSO STIPULATED AND AGREED
that the same stipulation will be made in this cause
by complainant as to the use of the so-called Armat
machine at the Atlanta exposition in 1895, which
was made at page 1370 of said record on appeal.

Dated, New York, N. Y., July 16th, 1915.

GEORGE F. SCULL,
Solicitor for Complainant.

WETMORE & JENNER,
Solicitors for Defendants.

CIRCUIT COURT OF THE UNITED STATES
FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,

Complainant,

against

In Equity
No. 5-167.

INDEPENDENT MOVING PICTURES
COMPANY OF AMERICA,

Defendant.

Proofs for final hearing on behalf of the defendant, taken before N. Curtis Lammond, Notary Public, acting as Special Examiner by consent, in accordance with the 67th Rule of the Supreme Court, as amended, at the office of H. N. Low, Room 612, Ouray Building, Washington, D. C., on the 17th day of January, 1911, at 10 A. M.

Present—JOHN W. MUNDAY, Esq., Counsel for
Defendant.

PARKER W. PAGE, Esq., Counsel for
Complainant.

And thereupon, CHARLES F. JENKINS, a witness on behalf of defendant, was produced, and being sworn, testified as follows:

Direct Examination by Mr. John W. Munday:

Q1. What is your name, your age, and your residence?

A. Charles F. Jenkins, 42 years, 1808 Park Road, Washington, D. C.

Q2. What is your business, Mr. Jenkins?

A. At present and for several years past, I have been an inventor.

Q3. What connection, if any, do you have and have you had, with the art and practice of moving pictures?

A. I have been more or less actively engaged in this art off and on since 1890, rather more in the nature of an experimenter than as largely a manufacturer of apparatus and films used in this art.

Q4. What is your ability as to reading drawings of patents, and what experience have you had, if any, in that respect?

A. I am able to make mechanical, that is shop, drawings, and also able to make Patent Office drawings, and believe I am able to correctly interpret them, and have examined a great many patents and their accompanying drawings.

Q5. I wish you would give a brief history of your connection with the moving picture art, from the time you first entered that field.

A. My activity in this line began in 1890 and 1891, when some sketches were made for a mechanism to be used first as a camera to produce a series of related pictures on a band or ribbon. The first actual machine was made some time in 1892. This was more or less successfully used, and upon the showing made I was able to secure some financial backing for further experimentation. Another apparatus was built in 1893. The first application was filed on January 17, 1894. In June of 1894 an exhibition was given of pictures projected on a large canvas to some friends. In the fall of 1894, public exhibition for a fee was given.

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These exhibitions were seen by a gentleman, Mr. Thomas Armat, who was introduced to me by Prof. Benton Bliss of this city. Some few months later Mr. Armat and I entered into a contract arrangement, by which he was to finance the construction of certain of my apparatus, the immediate object being the production of suitable machines for exhibit at Atlanta, Georgia, at the Exposition held in that City in the fall of 1895. A disagreement having arisen between us to the wisdom of prosecuting a sole application in place of the joint application for certain mechanisms, we later compromised the arrangement, resulting in his acquiring the entire title to the joint application mentioned, since which time I have followed my own initiative in such work as I have done in this art.

Q6. What was this "first actual machine" like, which you say was made some time in 1892?

A. It was a box-like affair containing a mechanism for giving intermittent motion to the film, supported in the end of the box.

Q7. Do you mean that it was a camera for taking pictures on a film?

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A. Yes, sir, it was a camera for this purpose.

Q8. Is that camera still in existence?

A. No, sir, it has long since been lost.

Q9. You state that "another apparatus was built in 1893." What was that?

A. That was also a camera; but was capable and was changed by the enlarging of the shutter-opening, or rather the substitution of a shutter having a larger opening, and with the addition of an oil lamp for the exhibition of pictures previously made therein.

Q10. Is that 1893 apparatus still in existence?

A. No, sir; parts of it, principally the beater

device for giving intermittent motion to the film, was taken out of this camera and later used in a camera projector of improved construction.

Q11. Have you a drawing of that machine?

A. I don't think I have a drawing, but I have a photograph of it.

Q12. You say that in the fall of 1894, public exhibition was given. Who gave this public exhibition, where was it given, and what kind of apparatus was used?

A. The exhibition was given by me in a building in this city known as Convention Hall, during the Pure Food Exposition given by the grocers of this city, as I recollect it, and the mechanism was a peep-hole machine, or a machine one looked into to see the pictures and was made in accordance with the principles disclosed in patent No. 536,569, issued to me in 1895.

Q13. Coming down to the exhibit at Atlanta, Georgia, in the fall of 1895, who gave that exhibition, and what kind of an apparatus was used?

A. That exhibition was given by Mr. Armat and myself, and the apparatus was one in which a perforated film was used, drawn downward passed the exposure-window intermittently, by means of an eccentrically located pin or roller mounted thereon to give it the desired intermittent movement. The machine was equipped also with the usual lenses and light or lamp used in magic-lanterns or stereopticons and was driven by an electric motor.

Q14. Was that a peep-hole machine or was it one which threw the pictures on a screen?

A. This was a projecting machine, and the screen employed was approximately twelve feet wide.

Q15. Did you use a perforated film with that machine?

A. Yes, sir.

Q16. Where did you get that film?

A. Some of them I had previously made; others, and my recollection is that the bulk of them were such as were used in the Edison Kinetoscope or peep-hole machine which was then being marketed, having, as I recollect it, been on exhibition in this City for possibly six months, or possibly a little longer.

437 Q17. In that Atlanta exhibition machine exhibited by you and Mr. Armat, please state whether or not there were devices for supporting the bulk of a flexible film before and after exposure, combined with feeding mechanism located between the devices for supporting film and separate and distinct therefrom, one of said feeding mechanisms being constructed to uniformly feed the film and produce a pre-determined supply of slack, and the other adapted to intermittently feed the slack across the exposure window.

Mr. Page: Objected to as leading.

438 A. The machine mentioned had devices for supporting the bulk of flexible films before and after exposure; it had in combination a feeding mechanism located between said supporting devices and separate therefrom; the feeding mechanism which gave the film its intermittent movement across the picture window was an eccentrically located roller which bore evenly on the full width of the film for the brief interval of movement and left a slack during the period of exposure, which slack was taken up meantime by the continuously rotating sprocket. A spring arm with a pin thereon over which the film passed from the upper roll or supply created a variable slack above the picture window, the elas-

ticity of the arm insuring a gentle pull on the film as it was drawn from the upper roll.

Q18. Then, as a matter of fact, in this machine at Atlanta you did have between the two supporting reels or devices for supporting the bulk of the film, feeding mechanism separate and distinct from the supporting rolls, is that right?

Mr. Page: Objected to as leading.

A. Yes, sir.

Q19. State whether or not slack was produced in the film, and this slack fed across the exposure window?

Mr. Page: Objected to as leading.

A. Yes, sir, slack was so produced and fed across the window.

Q20. Is there any well known camera in use at the present time among moving picture people that resembles this Atlanta machine of yours? And if so, what is it called?

A. Yes, sir; the camera known as the Gaumont camera has exactly this method of feeding the film intermittently, and other features of generally similar character.

Q21. State whether or not you have been engaged since 1895 in the manufacture of cameras of this general type?

A. I have made a number of cameras since that date, employing this beater movement.

Q22. Have you examined this patent to W. Latham, No. 707,934, the patent in suit, and do you understand the same?

A. Yes, sir; I have examined it, and believe I understand it.

Q23. Mr. Latham intimates, inferentially, in this patent that he secures "accurate registration of the successive pictures with the axis of the projecting lens." Is it possible with that apparatus to secure accurate registration of the kind mentioned?

A. No, sir; I do not think so.

Q24. Please give your reasons for believing that that machine cannot be employed and operated to secure accurate registration of the successive pictures with the axis of the projecting lens?

443 A. My experience has taught me that absolute accuracy of register of the film at this point is an impossibility. Mr. Latham employs perforated film and sprocketed wheels to feed it intermittently, and I have never seen, have never made, and from my experiments and experience am absolutely convinced that a machine cannot be made which will feed a perforated film throughout the entire length of a considerable sized roll with absolute accuracy of register in the axis of the lens, that is, at the exposure window. My opinion is that the principal reason why this is impossible is because of the uneven fit, the impossibility of obtaining an accurate

444 fit of the sprockets in the perforations. The sprockets are always cut, and of necessity should be cut with sides or contacting faces, faces contacting with the film, with a gear contour. The necessity for this is that the sprockets are located on a circular surface while the film approaches the teeth tangent to this circular surface and in a straight line. Obviously, therefore, the stepping into and out of the perforations of the film is in an arc, and to prevent the striking of the top of the tooth on the film, the tooth is pointed, as explained above. If, therefore, the film should be caught at the base of the tooth or sprocket it will be pulled down

slightly farther than it would if caught more nearly at the top of the tooth. This in a measure accounts for the jumpy movement on the screen of projected pictures from perforated film. Celluloid film swells and shrinks with weather conditions and also in the process of development. I think it will be easily understood, therefore, that if a standard perforated ribbon shrinks or swells, that is lengthens, either by reason of development or of dampness in the air, there will be difficulty in making it fit any given size sprocket wheel. This is recognized in the art as practiced to-day with perforated film, and to accommodate it the perforations are made larger than the sectional area of the base of the tooth or sprocket. It will also be obvious, therefore, that there is an opportunity for the film to move over the smooth surface of the sprocket wheel at least the distance equal to the difference between the size of the sprocket and the size of the perforation in the film. In a constantly moved film this latter difficulty is not encountered, certainly not to the extent that it is in the intermittently moved film, for in the intermittently moved film there is a tendency for the film to run ahead slightly after the feeding sprocket has actually stopped. This is also recognized as a defect in this system, and it is the custom of those skilled in the art to employ what are known as tension springs in an attempt to instantly stop the film as soon as the feeding sprocket stops. It is conceded that this movement is but slight, though in some make of machines when feeding some known make of film, this difference is very considerable. It must not be forgotten, however, that even the slightest inaccuracy of register is magnified on the screen in exact proportion to the magnification; for example, suppose we

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have a three-inch focus lens and a projection of 100 feet. The error, in such case, will be magnified 400 times, and, as I pointed out above, accounts for the jumpy pictures on the screen.

Q25. Would it be possible to produce anything but jumpy pictures with the apparatus of the Latham patent in suit, as the same is constructed?

A. It would not.

449 **Q26.** Dismissing from the mind for the moment the Latham patent, which is for a Projecting Machine, and turning our attention to cameras, do you know any means for producing a series of equal spaced photographs on a continuous flexible film?

A. Yes, sir. The most accurately spaced pictures are those made on unperforated film. This spacing is in my opinion absolutely as near accurate as human mechanisms can be made. The variation if it exists is unmeasurable and because the reproduced pictures, reproduced on the canvas, do not jump or otherwise vibrate, even though magnified 400 times, as explained above, I think positively and conclusively proves this to be true.

450 **Q27.** Please explain by what means one is able to produce moving pictures equally spaced, as you have stated in the last answer. Please describe such a mechanism.

A. There are a number of mechanisms which accomplish this, both in intermittent and constantly running film, but I take it your question relates to intermittently fed film. For example, two rollers which, at certain parts of their circumference touch each other and for a certain other part do not touch each other, would, although they were rotated continuously, feed the film intermittently, the film passing down between them, because the film would be gripped by the two longer radii co-acting and

would be released between the shorter radii. Another method is to intermittently rotate two smooth rollers which constantly grip the film. Still another very successful method is to draw the film down between two rollers by the grip of the rollers on the film, one of the rollers being fixedly mounted eccentrically to its axis of rotation.

Q28. Can you take a series of pictures of moving articles on a continuous film which is perforated and operated by sprockets and have the pictures equi-distant from each other?

A. I have never seen results of this kind, nor have I ever been able to produce a film of this character, namely, a perforated film having pictures thereon equi-spaced.

Q29. Have you read the deposition of Mr. H. N. Low in this cause?

A. Yes, sir.

Q30. Did you note any inaccuracies of statement with respect to the prior art patents or the patent in suit, made by Mr. Low?

A. I did not.

Q31. Do you agree or disagree with Mr. Low's conclusions as expressed in his deposition?

A. I quite heartily agree with his conclusions.

Q32. Referring to Cross-Q9 of Mr. Low's deposition and his answer, I will ask you the same question that was asked Mr. Low, namely, Would there be any diffused light interfering with the operation of the camera shown in the patent No. 540,545 to R. D. Gray?

A. I am quite positive from my experience in building cameras that there would be no diffusion to interfere with the production of clear, discrete unfogged pictures. In my own camera I have found it unnecessary to put a shield to prevent this very

454 *Charles F. Jenkins.*

thing, the only caution necessary being to keep the film, other than at the point of exposure, out of the direct light coming through the lens.

455 Q33. I have intended in all my questions in this deposition to ask you only about photographs of moving objects for reproduction of motion pictures. My attention is now called by my colleague to the fact that some of my questions and some of your answers do not distinctly specify that the pictures referred to are pictures of moving objects. Will you please state how you understood my various questions and what you meant to answer in this respect?

A. I have understood all your questions to refer only to motion picture photography and motion picture apparatus, and my answers have been made with that understanding.

Adjourned until Wednesday morning, January 18th, 1911, at 10 A. M.

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January 18, 1911.

Met pursuant to adjournment.

Parties present as before.

Witness Charles F. Jenkins, continuing:

Q34. Have you some photographic enlargements of motion picture films which represent the character of spacing between the pictures produced by sprocket operated cameras working with perforated films, and the positive grip cameras working with unperforated films.

Mr. Page: Objected to as irrelevant and immaterial.

A. I have. They are here. This one is an enlargement from perforated negative film, and this one from unperforated negative film.

The samples produced by the witness are offered in evidence and marked, respectively, "Defendant's Exhibit Enlargement of Perforated Film," and "Defendant's Exhibit Enlargement of Unperforated Film."

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Mr. Page: The Exhibits are objected to as irrelevant and immaterial.

Q35. Mr. Jenkins, are those fair samples of the work ordinarily done by the two kinds of cameras?

Mr. Page: Objected to as immaterial and irrelevant.

A. Yes, sir; they are.

Q36. Did you ever exhibit your early apparatus for motion picture production, and describe the same to the members of the Franklin Institute?

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A. Yes, sir; I gave an exhibition of the apparatus before the Franklin Institute at a session of its regular meetings, and the matter was referred to a committee for detailed investigation—the usual detailed investigation under such circumstances.

Q37. When was this?

A. I am not sure as to the exact date, but my recollection is that it was in the winter of 1896-97. I remember that after the committee had reached its conclusion, and published the usual invitation for the expression of opposition to their conclusions there was opposition expressed and that

some months elapsed, how many I don't remember, before they reached their final conclusion and recommended to the institute an award in recognition of merit brought out in the invention.

Q38. When was that award made?

A. That award was made in 1898—the early part of 1898, as I remember it.

Q39. Please state what the award was, and to whom?

461 A. The award was in the nature of a gold medal known as the Elliott-Cresson medal, the highest award which the institute ever gives, I believe, and was accompanied by a report of the findings of the committee. The award was to me.

Q40. I wish you would give some further details of the exhibition that you made at the Atlantic Exposition, in the fall of 1895. Thus, was the exhibition a moving picture exhibition?

A. It was, yes, sir.

Q41. How were the moving pictures shown?

462 A. On a large canvas screen, about 12 feet wide, as I recollect it, by means of a moving picture projecting machine employing a long strip of film, or rather several of them, the light employed being an arc lamp.

Q42. Was this moving picture representation a successful or an unsuccessful one?

A. The exhibition, itself, was a very successful one, the equal in every respect of exhibitions at the present time.

Q43. What was the character of the exhibition? Was it to the public and free, or was it to the public and paid admission, or how?

A. It was a public exhibition, paid admission, and I think the price of admission was twenty-five cents.

Q44. Now, please give me some details of the mechanism of the exhibiting machine which you used there. You say a film or films were used. How were these films supported in the exhibiting machine?

A. The films were, as I recollect it, each wound on a small bobbin, that is, each particular series of pictures or subject was wound on its separate spool or bobbin. These spools were placed on a pin or stationary support located above the feeding mechanism. This mechanism was of such a character as to produce a slack between the upper roll of film and the intermittent feeding mechanism, and a slack below the intermittent feeding mechanism from which latter position it was carried to a receiving spool upon which it was re-wound, the spool being the same in general character as the original spool from which the film was drawn.

Q45. Please explain the make of the intermittent feeding mechanism which fed this film intermittently back past the exposure window from one slack or loop to the other?

A. This consisted of an eccentrically located roller, that is, a roller located eccentrically on the face of a revolving disk.

Q46. Was this machine practically the same as what is known as the Gaumont camera, as method of handling the film?

A. Yes, sir.

Q47. What became of this exhibiting machine that you had down at Atlanta, and which you have just described?

A. To intelligently answer this, I should like to say that we had three exhibiting machines, two of which were alternately in use, the third being a reserve machine. That these machines were made

as copies from an exhibiting machine I had previously built, the three machines referred to, however, having been paid for, that is, the construction of them was paid for by Mr. Armat. Our exhibiting building at the Exposition was located near an old plantation show, and when this latter caught fire from open gasolene torches, as I understood at the time, the fire was communicated to our own building which Mr. Armat told me was burned to the ground, he having been able to save one or more of these machines, as I recollect it, although possibly I am wrong in this and that nothing was saved. I was in Washington at the time, and this report was brought to me by Mr. Armat, although I think he telegraphed me at the time. If these machines were saved, Mr. Armat probably brought them away with him. I never saw them again. I was employed at the time in the United States Life Saving Service, head offices being located in this city. I had been granted leave to assist in establishing this exhibition at Atlanta, and after our discouraging fire I went back to work. So far as I was concerned, the only exhibiting machine I had left then was one I had where I lived on East Capitol Street of this City.

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Q48. What was that exhibiting machine like, that you had on East Capitol St. in this City, where you lived and which was the only one you had left after the fire?

A. This machine was one of which the three built and taken to Atlanta were copies. I presume, therefore, that the description above is sufficient.

Q49. What became of this machine? State how it went out of your possession, if it did.

A. It was taken away from my house forcibly by possibly a writ of replevin or some legal process.

I was away at my place of employment at the time, and as this was my first experience in any legal controversy, matters were not as clear to me then as they possibly are now. In other words, I was a good deal agitated, as was also the landlady with whom I lived, for as clearly as I could understand from her the parties who came there got past the front door by a ruse and finding out in some way, possibly by adroit questioning, that my room was the front room, second floor, they went there and finding the door locked, broke it open and took this machine away with them. The landlady did not know any of the parties, as I recollect her description of it, and all ever I knew of it was the suit which came up a little later, in which Mr. Daniels, a real estate partner of Mr. Armat, was present with his attorney. At any rate I never saw the machine again, but I have been told that this machine was taken to New York, showed to Mr. Edison by Mr. Armat, and that the same was exhibited at Koster & Bial's Theatre, New York.

Q50. Please state whether or not at this time, when as you were informed, your machine was taken away from your room forcibly and went into the hands of Mr. Edison,—please state whether or not up to that time Mr. Edison had made any public exhibitions of moving picture apparatus which threw the picture upon a screen in the manner your machine did.

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Mr. Page: Objected to as irrelevant and immaterial.

A. This exhibition at Koster & Bial's was, in the public press heralded as the first public exhibition of Edison's projecting machine and was known and heralded as the Edison Vitascope, and I am con-

fident in my own mind that this was the first public exhibition that was ever made of moving pictures on a large canvas under the name of Edison's machine. I am aware that Mr. Dickson in a pamphlet published by himself and his sister, say that he exhibited to Mr. Edison on his return from Paris pictures projected on a canvas, but he also explains that these were very indistinct and made from a continuously running moving picture band. This system or method of exhibiting motion pictures is absolutely worthless, being simply Mr. Dickson's construction of what is known as the Edison Kinetoscope or peep-hole machine, the only machine which, as far as I am aware, Mr. Edison ever publicly exhibited. This is as a projector absolutely of no value and was abandoned by them, as was also an attempt made by Mr. Latham with a similar construction, at Atlanta at the same time Mr. Armat and I were there. Mr. Latham had this machine in a store, as I recollect it, down town in the City proper and not out on the Fair Grounds. Mr. Latham saw our exhibition and also invited us down to see his.

Mr. Page: Answer objected to as irrelevant and immaterial, as largely hearsay and secondary evidence, and as volunteered.

Q51. You speak of a Mr. Latham being at the Atlanta Exposition, was that the Woodville Latham of the patent in suit?

A. I am informed it was, and so believe.

Q52. Do you say that Mr. Latham was at Atlanta exhibiting a machine, a moving picture machine, in a store down town, at the same time you were exhibiting your moving picture machine at the Atlanta Exposition?

A. Yes, sir.

Q53. Did Mr. Latham see your machine?

A. Not while I was in Atlanta, although I think that Mr. Armat told me that Mr. Latham saw it.

Mr. Page: Objected to as hearsay.

Q54. Did you see Mr. Latham's machine that he was exhibiting in a store in Atlanta?

A. No, sir, not the actual film-feeding mechanism, but that was unnecessary to tell me what it was, for any one skilled in the art knew from the results or lack of them the method employed in feeding the film. I had no curiosity to see it, that is the film-feeding mechanism proper. The remainder of the machine I did see, and remember distinctly the method of securing current therefor, for Mr. Latham explained to me that he required a very high power of light and I remember distinctly also that because they used alternating current in that part of the City and because his machine required direct current he was obliged to install an alternating-direct-current rotary generator to secure the current he required. All this I saw, as well as having had it explained to me by Mr. Latham. The results on the canvas bore out his explanation so that I think I thoroughly understood what he was driving at and the troubles he encountered.

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Q55. Please describe, so far as you are able from what you saw of it, the character of the machine he was exhibiting at Atlanta?

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A. I have explained the method of producing the current. The machine in which this current was used to illuminate and feed the film was as follows: A large spool for film was located at the lower part of the machine; a similar large spool was located

at the upper part of the machine; between these two spools which were well separated, a feature that struck me at the time, were certain rollers for advancing the film past an exposure window; in front of this exposure window rotated a rather large disk shutter, the purpose of which was to give brief exposure to each picture as it came into axial line with the projecting lens located in front of, and the condensing lenses which were located back of the exposure window; the arc lamp which furnished the light being also located in this same axial line.
479 The film was drawn continuously from one reel to the other, continuously past the exposure window, which I knew by reason not only of the lack of light and sharpness of the picture on the screen but by reason of the very narrow opening in the shutter for giving the required brief exposure to the pictures on the film.

Q56. Do you mean that you knew from the character of the pictures thrown by Mr. Latham's machine on the screen, and by the nature of the shutter opening, and by the lack of light on the screen that Mr. Latham was operating with a film that was in continuous motion without stopping in that machine?

A. Yes, sir.

Q57. He was then using or attempting to use for projecting purposes practically the same machine that Edison employed as a peep-hole machine or kinetoscope. Is that right?

Mr. Page: Objected to as suggestive and leading.

A. Yes, sir; that is right. In reference to my answer to Question 51, in which I say that the Mr.

Latham I saw at Atlanta was the Woodville Latham of the patent in suit, I wish now to add that I have just been informed that Woodville Latham at that time was an old man, and that he had some sons. The man I saw at Atlanta was a middle-aged man with dark hair, and I may be mistaken about his being Mr. Woodville Latham of that patent.

Cross examination waived.

Signature waived.

Defendant's counsel offers in evidence, as showing the prior art, the Letters Patent No. 233,882, to R. T. Smith, for Paper Perforating Machine, dated November 2, 1880; also Letters Patent No. 223,866, to the same man and for the same subject, dated January 27, 1880.

Certificate waived.

Adjourned until further notice.

UNITED STATES CIRCUIT COURT,
SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,	In Equity. No. 5-167.
Complainant,	
vs.	Patent No. 707,934.
INDEPENDENT MOVING PICTURES COMPANY OF AMERICA,	
Defendant.	Latham.

Testimony taken on behalf of defendant before John A. Shields, Esq., Standing Examiner, pursuant to notice, at the offices of Kenyon & Kenyon, 49 Wall Street, New York, N. Y., beginning at 11 A. M., Feb. 16th, 1911.

Present:

486 PARKER W. PAGE, Esq., for Complainant.

J. W. MUNDAY, Esq., and RICHARD EYRE, Esq., for Defendant.

BAXTER MORTON, a witness subpoenaed on behalf of defendant, being duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. Please state your name, age, residence and occupation?

A. Baxter Morton; age, 35; Borough of Manhattan, New York City; occupation, lawyer and manufacturer.

Q2. Have you appeared here to-day in response to a subpoena served upon you?

A. Yes, I have.

Q3. What are you a manufacturer of?

A. Motion picture projecting machines.

Q4. Under your own name, or under what name?

A. I am vice-president and general manager of the Nicholas Power Co., which company manufactures motion picture projecting machines known as Power's Cameragraphs.

Q5. How long have you been connected with the manufacture of the Power's Cameragraph?

A. In my present capacity I have been connected with the manufacture of these machines since August 1st, 1907. Previous to that time I had acted as patent counsel for Mr. Nicholas Power, from the summer of 1904 down to that date and had acted in an advisory capacity in regard to the commercial and manufacturing end of Mr. Power's business, as well as handling his patent business.

Q6. I understand that these Power's projecting machines employ an intermittently moving band. If I am right will you please describe the mechanism by which that band is moved intermittently through the machine?

A. The band or film which bears the picture is moved through a Power's Cameragraph by three toothed sprockets arranged one above the other which engage perforations formed in the band, the topmost sprocket is constantly rotated and therefore moves the film constantly and uniformly. The sprocket next in order is rotated intermittently by what is commonly known as a Geneva stop move-

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Baxter Morton.

ment, by means of which the sprocket is given a quarter revolution at each action of the Geneva stop movement. The lowermost sprocket is rotated constantly like the topmost sprocket and advances the film constantly and uniformly.

Q7. At what position relative to these three sprockets is the lens opening of the projector?

A. The lens opening of the projecting machine is located between the top sprocket and the middle or intermittent sprocket.

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Q8. Where are the main supply and delivery reels located?

A. The travel of the film is downward through the machine and the supply reel is therefore placed above the machine. The delivery or take-up reel is usually placed below the machine, but is sometimes placed in front of it.

Q9. In the operation of this Power's Camera-graph are there any slacks or loops formed anywhere in the band or film and if so where are they and how are they produced?

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A. Two loops or slacks are formed in the band of the film, one loop commonly called the upper loop is formed between the upper or feed sprocket, and the intermittent sprocket, the other or lower loop is formed between the intermittent sprocket and the lower or take-up sprocket.

Q10. How are the three sprockets you have referred to driven, that is, how do they receive their power?

A. The primary source of power for the machine is usually a crank turned by hand, the shaft upon which the crank is mounted being geared by continuously operating gears to the upper and lower sprocket shaft and being geared through a Geneva stop motion or its equivalent to the intermittently revolving sprocket.

Q11. If the machine has a film guide near the lens opening, what is the location of the upper loop or slack with relation to this film guide?

A. The opening through which light passes to the lens is about two inches above the intermittent sprocket. The film guiding devices are arranged to hold the film flat as it passes this opening, and the loop above the intermittent sprocket is formed between the upper or feed sprocket and these guiding devices.

Q12. Are you familiar with the Latham patent in suit No. 707,934, a copy of which I now hand you?

A. I have had occasion to examine this patent casually some time ago and am moderately familiar with its contents.

Q13. In what way, if any, does the Power's Cameragraph differ in its details for producing the movement of the film or band from the mechanism shown in the Latham patent?

A. The mechanism shown in the Latham patent comprises two continuously driven sprockets with an intermittently moving sprocket between them. To this extent it is precisely similar to the mechanism used in Power's Cameragraph. The arrangement of the gearing for imparting motion to the several sprockets is different in construction but apparently substantially identical in operation with the arrangement employed in Power's Cameragraph.

Q14. Will you kindly read claims 1, 3, 5 and 8 of this patent and see if either of them describes the Latham structure any more perfectly than the Power's Cameragraph structure?

A. I have read the claims mentioned and find that they describe the mechanism of the Power's

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Baxter Morton.

Cameragraph as accurately as they do that shown in the Latham patent.

Q15. How long have these Power's Cameragraphs such as you have described in answer to preceding questions been on the market?

A. To my personal knowledge, since the summer of 1904.

Q16. Was it a new business then?

A. Mr. Nicholas Power entered into the business of dealing in and repairing moving picture projecting machines some time in the year 1899.

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Not very long after this he began to manufacture moving picture projecting machines. I don't know the date at which he began this manufacture.

Q17. But do you know that it was before 1902?

A. It was as early as 1902, but I cannot be positive that it was before that year.

Q18. Are these Power's Cameragraphs licensed under the Latham patent in suit, and if so how long have they been so licensed?

A. They have been licensed since February, 1909, under this patent.

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Q19. During the period prior to February, 1909, do you know whether any suit was commenced against the Nicholas Power Co. or Power for infringement of this Latham patent?

A. No suit for infringement of this patent was ever brought against Mr. Power or the Nicholas Power Co.

Q20. Or so far as you know against any dealer in or user of the Power's Cameragraph?

A. Not before the present suit. I mention the present suit because I believe the defendant uses the Power's Cameragraph to display its films to its customers.

Q21. Do you know whether the Nicholas Power Co. or Mr. Power were either of them threatened

with suit for infringement of this Latham patent, or notified by the owner of the patent that either of them were infringing the same?

A. I know that neither Mr. Power nor the Nicholas Power Co. has been notified that either was infringing the patent in suit since the summer of 1904, when I became Mr. Power's patent counsel. I have reason to believe that neither Mr. Power nor the company has ever been notified of such infringement or threatened with suit for such infringement.

Q22. When a license was given the Nicholas Power Co. in Feb., 1909, was any payment or consideration of any kind given by the Nicholas Power Co. to apply to any claims for past infringement of the Latham patent in suit?

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Mr. Page: Objected to as irrelevant and immaterial.

A. No payment or other consideration was given for any past infringement at the time the Nicholas Power Co. was licensed under the patent in suit.

Q23. Was the license that you then obtained specific to the Latham patent alone or to a number of patents?

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Mr. Page: Same objection.

A. The license enumerated a considerable number of patents under all of which the Nicholas Power Co. was licensed to operate under on precisely the same terms.

Q24. Were there any terms relating particularly to the Latham patent, or did the terms of the license relate *en masse* to the whole group?

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Baxter Morton.

Mr. Page: Same objection.

A. The license provided for a specific royalty on each Power's machine without any reference to any particular patent.

Q25. Can you remember approximately how many patents were involved in this license?

Mr. Page: Same objection.

A. I think the number was thirteen.

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Q26. During the period that you have been connected with this business and prior to your receiving a license, what, if any other, projecting machines were on the market which employed the continuously revolving feed sprocket separate and distinct from the supply roll and the intermittently operated sprocket, the film guide near the exposure window, the mechanism acting to produce a slack or loop between the continuously operating sprocket and the film guide?

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A. Such machines as are described in your question have been made ever since my connection with the moving picture business by the Edison Manufacturing Co., the Enterprise Optical Manufacturing Co. and S. Lubin, of Philadelphia. Besides these the Selig Polyscope Co. of Chicago and the Viascope Manufacturing Co. of the same place made projecting machines having a continuously moving feed sprocket and a reciprocating claw mechanism below the exposure window which imparted an intermittent movement to the film. Eberhardt Schneider of New York also made a few projecting machines having both the intermittently moving sprocket and the continuously rotating feed sprocket. There were other machines of this type made by the Vitagraph Co. of America, but I am

of the impression that they were used only by the maker and were not offered on the market for sale.

Q27. Are you familiar enough with the construction of the various machines mentioned in your last answer to say whether they are each accurately and exactly described by the language of claim 1 of the Latham patent?

A. All of the machines mentioned in my last answer are accurately described by the language of claim 1 of the patent in suit.

Q28. Prior to the taking of the license by your company did you ever hear of any suits or threats of suits against anyone for the alleged infringement of the Latham patent?

A. No.

Direct examination closed.

Cross Examination by Mr. Page:

XQ29. The use of the two continuously rotating sprockets to form a loop on each side of the intermittently moving feed mechanism for the film is a very important and desirable feature in machines of this kind is it not?

Mr. Eyre: The question is objected to as improper cross examination and counsel is notified that he is making the witness his own.

Mr. Page: Counsel for complainant of course does not accede to any such proposition?

A. The use of two sprockets or other devices on opposite sides of the intermittently moving feed

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mechanism for the film is an important and desirable feature in moving picture projecting machines as equipped at this time.

XQ30. Manufacturers of such machines since 1904 have found it necessary, have they not, to provide for this feature in projecting machines in which there is a positive engagement between the film and the feed mechanism?

Mr. Eyre: Same objection and notice.

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A. I don't know exactly what you mean to include under the terms "this feature," but assuming that you mean a provision of mechanism for forming a loop or slack in the film above the intermittent feeding mechanism, I would say that manufacturers of projecting machines have not found it necessary to provide this feature though they have found mechanism of this character to be very useful and convenient.

XQ31. How many moving picture machines, either cameras or projecting machines, were manufactured and put on the market to your knowledge by Eberhardt Schneider prior to Feb., 1903, and which involved the construction and mode of operation of the Latham patent in suit?

A. I personally saw only about a dozen such machines made by Eberhardt Schneider prior to the date mentioned.

XQ32. Do you know whether Mr. Power ever had any communications with the American Mutoscope and Biograph Co. or its officers looking to an agreement to manufacture projecting machines or cameras. I refer to a date prior to Feb. 25th, 1909?

A. I don't know of any negotiations between Mr. Power and the American Mutoscope & Biograph

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Co. to manufacture projecting machines or cameras on a contract basis, by which I mean an agreement to manufacture a certain quantity of these machines, but I do know that Mr. Power of the Nicholas Power Co. have supplied a considerable number of projecting machines to the American Mutoscope & Biograph Co. extending over practically the entire period since Mr. Power began to manufacture projecting machines.

XQ33. Does your familiarity with the litigation during the last ten years under patents for moving picture apparatus enable you to state that during the greater portion of that period the American Mutoscope and Biograph Co. at least up to some time in 1909 were involved in very active litigation?

A. Yes.

XQ34. What is the Enterprise Optical Manufacturing Co.?

A. This is an Illinois corporation, the principal business of which is the manufacture and sale of moving picture projecting machines and accessories.

XQ35. How long had they been in this business prior to Feb., 1909?

A. To my knowledge at least five years before that, but I believe that they had been in the business for a number of years before I became acquainted with their operations.

XQ36. Is this the concern that advertises largely small or cheap outfits for amateur exhibitors?

A. They did up to about two years ago.

XQ37. Do you know how long the Viascope Co. of Chicago has been in the business of manufacturing and selling projecting machines like those of the Latham patent in suit?

A. I think this concern began the manufacture

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Herbert L. Miles.

of such machines about four years ago, though it may have been earlier.

XQ38. Will you please answer the same question with reference to the Selig Polyscope Co. of Chicago?

A. I think that the Selig Polyscope Co. of Chicago has been making such machines for at least seven years.

Cross examination closed.

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Deposition closed.

Signature waived.

HERBERT L. MILES, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

516 A. Herbert L. Miles; age 40; 601 West 125th St.; office manager.

Q2. Have you ever been connected with the moving picture business and if so for how long and under what circumstances?

A. Yes, 13 years, as a manufacturer of films, owner and manager of moving picture film exchanges and dealer in films, moving picture projecting machines and all accessories.

Q3. During the period prior to Dec., 1908, in what way did you carry on any business in projecting machines?

A. We purchased them as jobbers and as exhibitors. I have also been an exhibitor of moving pictures, owning some 22 theatres.

Q4. When did you begin this buying and selling of projecting machines?

A. 1900.

Q5. Under your own name, if not under what name?

A. Under the name of Miles Brothers.

Q6. That is, you were one of the partners?

A. Yes.

Q7. And how long did the business continue as a partnership?

A. Until Dec., 1907.

Q8. And then under what name did it continue and for how long under that name?

A. Miles Brothers, Incorporated, until May, 1910.

Q9. What projecting machines did Miles Brothers buy and sell while they were in business and what projecting machines were used by your theatres?

A. Power's Cameragraph, made by the Nicholas Power Co., formerly N. Power, the Edison projector, two different models, made by the Edison Mfg. Co., Orange, N. J. The Lubin Cineograph made by the Lubin Mfg. Co. or S. Lubin, Phila. The Polyscope made by the Selig Polyscope Co., of Chicago, Ill. The Bioscope made by the Warwick Trading Co., London, England, and then other machines as they came out from time to time, for example, the Dressler machine, Pathe Freres, Gaumont, etc. In the theatres controlled by us we used exclusively the Power's and the Edison machines.

Q10. Will you please state, so far as you can

recollect it, as to each of these machines, when you first began dealing in them and how long you continued to deal with them?

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A. The Edison machine was the first one we purchased about '99 as an exhibitor, then the Lubin shortly after that, and then the Power's machine when they first started to manufacture a commercial machine in considerable quantities. The Power's machine I think was in 1902 or '03. The Selig Polyscope we had handled before the Power's machine. I rented a lot from the Biograph Co. in 1901 over their present studio at 11 East 14th Street, and I recollect distinctly of having at that loft for displaying purposes a Selig Polyscope, two models of the Edison machine, a Lubin machine and an optograph manufactured by the Enterprise Optical Co. which I failed to mention in the list of machines before as handled by us. We vacated that loft and moved directly across the street in 1902, the latter end, or the beginning of 1903. We handled these machines together with the other makes mentioned, continuously up to May, 1910, the Edison and Power's make predominating in our sales.

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Q11. Will you give a general idea of the volume of your business in projecting machines in this period beginning 1900?

A. In 1906 and 1907, we had a standing order with the Power's Company for the delivery of five complete machines daily, besides which we were selling Edison machines as may have been demanded by our customers. The demand in this country for machines at that time was greater than the supply.

Q12. Give me the best approximation you can as to the number of projecting machines sold by your firm from 1900 to 1908, both inclusive?

A. I would say approximately 3,500 to 4,000 machines.

Q13. Were you familiar with the construction of each of these machines whereby the film was fed from the supply reel, the feed being intermittent with respect to the exposure window?

A. Yes.

Q14. In the Latham patent in suit the film is drawn from the supply reel by a continuously and uniformly rotating sprocket engaging perforations in the film and is intermittently moved across the exposure window by a separate intermittently moving feeding mechanism, there being a slack between the constantly rotating sprocket and the exposure window, and it also being a fact that the continuously rotating sprocket is separate and distinct from the supply reel. These feeding mechanisms are positively moved by being connected through gearing with a manually rotated shaft. Will you state whether what I have just stated as to the Latham patent in suit is, or is not true, as to each of the various projecting machines you have above referred to?

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A. Yes.

Q15. Were you or your firm ever sued under the Latham patent in suit?

A. No.

Q16. Were you or your firm ever threatened with suit under the Latham patent in suit or notified that you were infringing the claims?

A. No.

Q17. Did you have any license of any kind under the patent in suit?

A. No.

Q18. When did you first hear of any one having been sued or of any suit being threatened or of

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any notice of infringement being given with relation to the Latham patent in suit?

A. 1908 or thereabouts against the Biograph Co. This was some shop talk which I heard at the Biograph Company's plant among their employees on 14th Street.

Q19. Did you ever sell any of the before mentioned projecting machines to the American Mutoscope & Biograph Co.?

A. My recollection is that the first Power's machine the Biograph Co. ever used, I negotiated the purchase of it from the Power's Co. or Nicholas Power. After that they bought quite a number direct.

Direct examination closed.

Cross Examination by Mr. Page:

XQ20. Have you ever manufactured yourself or been connected with any firm engaged in the manufacture of projecting machines?

A. Yes. Miles Bros. in 1907 equipped a complete manufacturing plant at 259 Fifth Avenue, at a cost of some \$20,000 and had a pay roll of \$900, engaged for the express purpose of manufacturing moving picture projecting machines. We turned out also about 100 projectors. The business of manufacturing these machines was discontinued on the death of my brother, who was the machinist of the firm. He died Jan. 1st, 1908.

XQ21. With that exception your business in connection with projecting machines and cameras has been either that of an exhibitor or a jobber, has it not?

A. Yes.

XQ22. Of how many companies during the period from 1902 to 1908 did you handle the product, either films, projecting machines, cameras, or other moving picture accessories?

A. In addition to those already mentioned we handled films of the American Mutoscope & Biograph Co., the Vitagraph Co., G. Melies, and some foreign companies.

XQ23. Did you sell or assist in leasing or renting any of the films manufactured by the American Mutoscope & Biograph Co. during the year 1908?

A. I could not tell that without consulting some records. There was a reorganization of the trade occurring just about that time and I don't recollect whether we were buying from the Biograph Co. or not.

XQ24. Did you continue to deal in the film manufactured by the Biograph Co. up to the time when that company was being identified with the Motion Picture Patents Co.?

A. No. There was a period of some months when we did not buy their product, not being allowed to do so by Edison license agreement.

XQ25. Were you ever approached with offers or propositions of a license under patents owned by the Motion Picture Patents Co.?

A. Yes, we had a license from them, from Feb., 1909, to May, 1910.

XQ26. Didn't that license include the Latham patent in suit here?

A. That I cannot recollect, but a copy of the agreement would indicate whether that is so or not.

XQ27. Have you a copy of that license agreement?

A. I think so. The Patents Co. has a duplicate copy.

XQ28. Did the Patents Co. ever make more than one license with you?

A. One for each office. We had three offices at that time.

XQ29. Under what name did you appear as licensee?

A. Miles Brothers, Incorporated.

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XQ30. I infer from your testimony, Mr. Miles, that you have had a very extended experience with motion picture machines, particularly those for projecting pictures. That is a fair deduction from your testimony and a fair statement of the fact, is it not?

A. Yes.

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XQ31. Is it not a fact that substantially all of the machines which handle long lengths of celluloid film and feed the same with considerable rapidity past an exposure window or gate, employ two independent feed mechanisms, one continuously operating and the other operating intermittently on the slack film produced by the continuous feed mechanism. In other words, have not the machines which have come under your observation all answered to the description of the Latham machine given by counsel for the defendant in Q14.

A. I answered that question yes, and the same answer to this one.

Cross examination closed.

Re-direct Examination by Mr. Eyre:

RDQ32. You have been asked as to a license agreement that Miles Brothers, Incorporated, entered into with the Motion Picture Patents Co. Was any consideration paid by Miles Brothers,

Incorporated, for this license other than promises to pay royalty in the future?

Mr. Page: Objected to as irrelevant and immaterial.

A. We paid no royalties as jobbers or in exchange and that is the only contract that I have referred to in my answer to Mr. Page's question.

RDQ33. What consideration did you have to pay for this license?

A. No monetary consideration. Simply leased films under the agreement under certain conditions, stated therein.

RDQ34. Did you have to make any payment of any kind of any alleged past infringement of the Latham patent or any other patent?

Mr. Page: Objected to as irrelevant and immaterial.

A. None whatever.

RDQ35. Do you remember whether this agreement gave a license under a considerable number of patents or not?

A. My recollection is that there was quite a number of patent numbers contained in the heading of the agreement.

Direct examination closed.

Deposition closed.

Signature waived by consent.

Adjourned to February 17th, 1911, 11 A. M.

New York, N. Y., Feb. 17, 1911, 11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

EDWIN S. PORTER, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to question by Mr. Eyre:

539 Q1. What is your name, age, residence and occupation?

A. Edwin S. Porter; age 40; manufacturer of motion pictures; residence, City.

Q2. Have you ever been employed with the Edison Mfg. Co., and if so for how long?

A. I was employed with the Edison Mfg. Co. from 1900 to Nov. of 1909.

Q3. During that time what opportunity did you have to become familiar with the projecting machines manufactured by or for that company?

540 A. I was engaged with the Edison Co. to design and improve any projecting machine or moving picture machinery, and was consulted almost constantly in regards to same.

Q4. At any time while you were with the Edison Mfg. Co. did that company manufacture a projecting machine having a feed mechanism for the film carrying the pictures including a sprocket engaging perforation in the film and continuously rotating to draw the film continuously and uniformly from the supply reel and producing a slack or loop between the sprocket and the exposure window, and a second sprocket wheel on the opposite side of the exposure window intermittently operated

so as to intermittently draw upon such slack or loop, the two sprockets being operated by gearing from a manually rotated shaft?

A. They did.

Q5. How early to your knowledge did that company manufacture projecting machines having the features mentioned in my last question?

A. Approximately, in fact I am positive from 1898.

Q6. And how long did they continue to manufacture such machines?

A. To the present date, that is with various improvements, not affecting the loop.

Q7. Did the Edison Mfg. Co. while you were employed with them manufacture any projecting machine except such as employed the features set out in my fourth question?

A. They manufactured no machines except of that type.

Q8. While you were with that company did you ever hear of there being a Latham patent for projecting machines?

A. I had heard of such a patent.

Q9. What did you know as to whether these machines were manufactured by the Edison Mfg. Co. under the protection of the Latham patent or in defiance of it?

A. It was generally understood that they had no license to use the Latham patent.

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Direct examination closed.

Cross Examination by Mr. Page:

XQ10. When did you say you entered the employ of the Edison Co.?

A. 1900, a few days before Thanksgiving, 1900.

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XQ11. Have you any personal knowledge of the operations of that company prior to that date?

A. Not personal. I am very well acquainted with Mr. Gilmore, the general manager, and Mr. James H. White, the manager of the moving picture department.

XQ12. Please explain more in detail what was the nature of your position with this company?

A. I was engaged by the Edison Mfg. Co. to improve and redesign moving picture cameras, projecting machines and perforators. Shortly after I went with them they put me in charge of the taking of the negative moving picture subjects, and at the same time I was called upon during the nine years I was with them to make improvements on the projector, camera and perforator.

XQ13. You were employed by the company in the capacity of a machinist were you not?

A. Before I went with the Edison Co. I had built and designed a moving picture projecting machine and was operating the same at the Eden Musee. Mr. White, also Mr. Gilmore, recognized the superiority of my machine over theirs and they engaged me more as a technical man to improve their machines.

XQ14. Did you ever attend any of the meetings of the directors or managers of the Edison Co. and take any part in the conduct of the business of that company?

A. I was on a committee which included about eight or ten of the officials and heads of different departments to pass upon the marketing or rather the censorship of moving pictures prior to putting them on the market. This being the only committee that I was on. I have often been called upon and consulted with Mr. Scull, Mr. Wilson and Mr. Edi-

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son in regards to improvements on machines and methods of manufacturing of moving pictures.

Mr. Page: In view of the cross examination of the witness from which it appears that his testimony is mainly hearsay, it is objected to on that ground.

Cross examination closed.

Deposition closed.

Signature waived by consent.

ALBERT E. SMITH, a witness subpoenaed on behalf of the defendant, being first duly sworn, deposes and says as follows in answer to questions by **Mr. Eyre**:

Q1. What is your name, age, residence and occupation?

A. Albert E. Smith, age 35; residence, Brooklyn, N. Y.; occupation, General Manager of the Vitagraph Co.

Q2. How long have you been with the Vitagraph Co.?

A. Since 1897.

Q3. You are familiar, are you not, with the projecting machines manufactured and sold since that time by the Vitagraph Co.?

A. I am. Not manufactured and sold; the Vitagraph Co. never sold anything.

Q4. What does the Vitagraph Co. do with the machines it manufactures—uses them, leases them, or both?

A. It uses them for its own exhibition.

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Q5. During this period has the Vitagraph Co. manufactured projecting machines and used them, which machines employed for feeding the film a continuously rotating sprocket engaging perforations in the film, separate and distinct from the main supply roll, and forming a loop or slack between the sprocket and the exposure window and also an intermittently operated sprocket drawing upon the loop or slack to feed the film past the exposure window, the two sprockets being operated by gearing from a manually rotated shaft?

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A. Yes.

Q6. Did all the projecting machines manufactured by the Vitagraph Co. after you became connected with that company employ the features I have set out in my last question?

A. Yes.

Q7. Do you know whether these machines were manufactured by the Vitagraph Co. prior to the latter part of 1908 under the protection of the Latham patent 707,934, copy of which I hand you, or whether they were manufactured in defiance of any alleged rights under said patent?

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A. We have a license to manufacture granted us by the Patent Company but I am not sure of the date of the license.

Q8. Prior to the license you obtained from the Motion Picture Patents Co. did you have any license under that patent?

A. No.

Q9. When you took that license, or when your company took that license, was any consideration given by your company for a release for any claim for past alleged infringement of the Latham patent?

Mr. Page: Objected to as irrelevant and immaterial.

A. I have no recollection of the terms of the contract.

Q10. Don't you as a matter of fact recall that your company did pay nothing under that contract unless it was in the form of an agreement to pay future royalties?

Mr. Page: Same objection.

A. At that time we turned over to the Patents Co. several patents of our own, but whether that was for the privilege of getting this license or not, I could not say.

Q11. Your company became interested in the Patents Co. at that time, did it not?

Mr. Page: Same objection.

A. I do not know what you would call interested.

Q12. Do you also recall that when you obtained the license from the Patents Co. it was a license covering a number of patents and not differentiating in any way between the Latham patent and any others.

Mr. Page: Same objection.

A. Yes, I think so.

Q13. You remember that this license agreement was not prior to 1908, do you not?

A. I could not be sure of the date.

Q14. Yes, but approximately?

A. Approximately.

Q15. It was not as early as 1907, was it?

A. I don't think so.

Direct examination closed.

Deposition closed.

Signature waived by consent.

New York, N. Y., February 27, 1911.

11 o'clock.

Met pursuant to agreement.

Present:

PARKER W. PAGE, Esq., Counsel for Complainant.
ALAN D. KENYON, Esq., Counsel for Defendant.

FRANK L. DYER, a witness called on behalf of defendant, being duly sworn, deposes and says in answer to questions by Mr. Kenyon as follows:

557 Q1. Please state your name, age, residence and occupation?

A. Frank L. Dyer; age 40; residence Montclair, N. J. I am a lawyer by profession, but have not practiced actively for the past three years. I am president of the National Phonograph Co. and the chief executive officer of the various corporations that are owned and controlled by Thomas A. Edison with the exception of the Edison Portland Cement Co. I am president of the Motion Picture Patents Co., the complainant herein.

558 Q2. How long have you been president of the Motion Picture Patents Co.?

A. Since December 18th, 1908.

Q3. Prior to December, 1908, have you been connected with any company in any capacity which company was interested in the motion pictures business?

A. I have been vice-president of the Edison Mfg. Co. since June, 1908, and have acted as counsel for that company in patent matters since November, 1897; the Edison Mfg. Co., among other things, is engaged in the manufacture of motion pictures and projecting machines.

Q4. In your connection with the Edison Mfg. Co., had you been familiar with the projecting machines that it had placed on the market prior to Dec., 1908?

A. Yes, sir.

Q5. For how long a period?

A. I am not able to state definitely, but my recollection is that the company was making projecting machines in November, 1897, when I first became connected with it.

Q6. And you were familiar, were you, with the projecting machines that it put on the market down to December, 1908?

A. In a general way, yes, sir.

Q7. You knew the general construction of the machines that they were putting out on the market at that time? 558b

A. Yes, sir.

Q8. I show you the issue of the publication "The Show World," dated April 4, 1908, and call your attention to an article on page 11, under the heading, "Edison Counsel Talks of Moving Picture War." I notice that this article headed as above and also "Orange, N. J., March 28th" purports to give a statement of Frank L. Dyer, general counsel for the Edison Mfg. Co., to a Show World representative. Are you the Frank L. Dyer who gave this interview with the representative of the Show World as set forth in the article to which I have called your attention? 558c

A. I am undoubtedly the Frank L. Dyer referred to, but I am not able to say whether the article in question is a correct interview or not.

Q9. You gave an interview to a representative of this paper, did you not at or about this time?

A. I think so.

Q10. Is the account of this interview substantially correct?

A. Yes. My recollection is that at that time the two conflicting interests in the motion picture field (the Edison and Biograph Companies) spent a good deal of time in talking about their patents in the trade papers and this article appears to be one

of the numerous articles that appeared in the trade press relating to these matters. I cannot say that the opinions that were expressed in an article of this kind would be as carefully considered as they might be. A good deal of the talk was largely for advertising purposes; the Biograph People pretended to sneer at our patents and it was human nature for us to sneer at theirs.

Mr. Kenyon: All but the first word objected to as irresponsible, immaterial, volunteered and incompetent.

Q11. I notice that in this article you say, among other things, "The Latham patent was granted August 26th, 1902, and according to the people who are now affirming its validity it has been infringed by every one since that time." What concerns did you refer to by "infringed by every one since that time"?

A. The various manufacturers of moving pictures in this country who I assumed made use of cameras involving the Latham invention and the manufacturers of projecting machines including principally the Edison Company, S. Lubin of Philadelphia, the Motiongraph Co. of Chicago, and the Power's Co. of New York.

Q12. Up to this time had any suits been brought on the Latham patent that is involved in this suit No. 707,934?

A. I am not able to say. There has been no suit brought against the Edison Co. that I know of.

Q13. As counsel for that company you would have known if any suit had been brought against them?

A. Yes, sir.

Q. 14. Do you remember attending a meeting of representatives of the Edison Mfg. Co. at the Auditorium Annex in Chicago, in March, 1908?

A. I remember a visit I made to Chicago in the spring of 1908, and I think it was in March.

Q14. You made similar public statements at that meeting to reporters with reference to the Latham patent, did you not? I mean similar or of the same general character as those contained in published interviews of yours in the Show World of April 4th, 1908?

Mr. Page: Objected to as wholly irrelevant and immaterial.

A. I am not able to say but it is not unlikely, because at that time we were just starting the licensee association under the Edison patents and naturally were disposed to minimize the value of any other patents.

Direct examination closed.

Defendant's counsel offers in evidence the article referred to by the witness published in The Show World of April 4, 1908, and it is marked "Defendant's Exhibit, Dyer Interview and Show World of April 4, 1908."

Signature waived.

No cross examination.

Deposition closed.

New York, N. Y., March 29th, 1911.
11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

THOMAS H. BLAIR, a witness called on behalf of the defendant, being first duly sworn, deposes and says as follows, in answers to questions by Mr. Eyre:

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Q1. What is your name, age, residence and occupation?

A. Thomas H. Blair; 53; manufacturer, Northboro, Mass.

Q2. Have you ever been connected with the photographic business, and if so, during what period?

A. I commenced in the business of photography in 1874 and 1875, was a professional photographer until the year '79, and then entered upon the manufacture of photographic apparatus particularly for amateur use. I have continued in that business until the year 1900. Had been for eight or nine years previous to 1900 a manufacturer of photographic rollable film and other photographic supplies and appliances for using the same.

Q3. Have you ever originated and patented any cameras for taking moving pictures?

A. Yes. Several.

Q4. Will you please state in a general way what patents you have taken out in moving pictures?

A. I am the patentee of the British patent No. 13,284 of 1896, also of the British 17,505, 1896, and the U. S. patent No. 611,231, Sept. 27th, '98, and others.

564

Q5. Referring to the United States patent 611,231, and the British patent 17,505 of 1906, which seems to show precisely the same camera, please state whether you ever actually constructed the camera shown in these patents?

A. I did, or rather, workmen carrying out my instructions and perfecting mechanical devices. I am not a mechanic. I do not do the work myself.

Q6. When was it that you had this camera constructed?

A. The year 1896, commencing about in May and finishing the same in July. I wish to add that the building of this camera was a matter of evolution, there being several preceding cameras so that it is difficult to definitely fix the date of commencing its construction.

Q7. What did you supply to your patent agents to enable them to make the drawings of your English patent 17,505 of '96?

A. The identical camera which I afterwards used for practical work and which I have with me.

Q8. Is this the camera on the table that you are referring to?

A. It is.

Defendant's counsel states that this is the private property of the witness and he does not desire to part with it even during the progress of this suit and it is considered unnecessary to proffer the same in evidence, but complainant's counsel may take the freest opportunity to inspect it and compare it with the drawings of the patents referred to.

Q9. How soon after you constructed this particular camera did you use it practically, that is, for anything but a mere experimental purpose?

568

Thomas H. Blair

A. During the month of August, 1896, was my first use.

Q10. And how long did you use it practically?

A. Five or six months.

Q11. Have you any of the film that you can produce with moving pictures thereon which you then made on this camera?

A. I have and produce it.

569

The witness produces a film of considerable size and now cuts off a short length of it.

Defendant's counsel offers in evidence the short length of film just cut off from the roll by the witness and offers the same in evidence as "Defendant's Exhibit, Moving Picture Film of Blair Camera."

Defendant's counsel offers in evidence copy of the English patent to Blair, heretofore referred to and the same is marked "Defendant's Exhibit, Blair English patent 17,505 of 1896."

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Q12. At the time that you constructed the camera which you have produced, what did you know as to the prior art of moving picture cameras or projectors?

A. Not very much. I was acquainted with the Le Prince patent. (The witness looked into his bag, examined papers therein and produced the Le Prince patent.) Which I find is dated January 10th, 1888, No. 376,247. Also the Donisthorpe and Crofts British patent and one or two others which I cannot now remember, all of them British patents. I was familiar with articles published in the Photographic Journals regarding the work on this

line by Marey. I cannot recall the details at the present time.

Q13. Had you at that time any knowledge by patents or publications of the work of Joly Latham, Armat, Jenkins, Edison, Casler, or Gray in moving picture cameras or projectors?

A. I am not certain about Joly, but I am certain that I knew nothing whatever about the work of the remaining parties named except that I was acquainted with the Edison Kinetoscope, which was not a projecting machine, nor a camera.

Q14. Was the Edison Kinetoscope as you knew of it a device using an intermittently moving film or a device using a continuously moving film? 572

A. Continuously moving film employing an endless band.

Q15. How long did you know of this Edison Kinetoscope?

A. I cannot remember definitely but I am of the opinion that it was at least two or three years.

Q16. Do you remember in a general way how the film in that kinetoscope was fed?

A. I do not remember sufficiently to explain, except that it moved continuously, employed a revolving shutter, moving in a direction opposite to that which the film moved.

Q17. What if any familiarity did you have with the film used in the Edison Kinetoscope?

A. I was very well acquainted with it, being in the business of manufacturing photographic rollable film and the companies bearing my name had supplied Mr. Edison with film cut the width of the film that was used in the kinetoscope. We did not perforate same, however.

Q18. Do you know whether or not the film used in these kinetoscopes was a perforated film? 573

A. I do know it was.

Q19. Do you know why it was perforated?

A. It was perforated to act as a sprocket chain in giving it a definite motion similar to the perforated metallic ribbons shown in the Le Prince patent.

Direct examination closed.

Cross Examination:

575 XQ20. Will you run film which you have produced through the camera which also is produced here in order that the operation of the camera may be observed?

A. The film that I have offered in evidence was made some fifteen years ago and has become so dried and shrunk that it does not fit the sprockets properly, the shrinkage having drawn the sprocket holes in the film closer together in both directions. It is not possible therefore to comply with this request and have the film operate perfectly. I am particularly sure that the film exhibited was made on this identical camera and the same machine used for projecting the pictures on this same film on the screen by aid of a lantern. This film has been projected a number of times.

New York, N. Y., March 31st, 1911,
11 A. M.

Met pursuant to agreement.
Present counsel as before.

ROBERT D. GRAY, a witness called on behalf of defendant, being first duly affirmed, testifies as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Robert D. Gray, 53 years; Ridgewood, N. J.; lens maker.

Q2. I show you a copy of United States patent to Robert D. Gray, of New York City, issued June 4th, 1895, No. 540,545, for Series Photographic Camera, and ask you whether you are or are not the same Robert D. Gray?

A. I am the same.

Q3. Do you know from what the drawings of this patent were prepared?

A. From my own ideas.

Q4. And what did you do to explain your own ideas to your patent attorney?

A. I furnished them with sketches and a written description and verbal explanation in addition.

Q5. How did the sketches which you furnished them compare with the drawings shown in the patent?

A. They were the same as I remember. Changes were required to meet the rules of the Patent Office.

Q6. Did your sketches show all the different features of construction that are shown in the patent drawings?

Mr. Page: Objected to as leading.

Mr. Eyre: Question withdrawn.

Q7. Will you state what different features of construction shown in the patent drawings were shown on the sketches you submitted to your attorney?

Mr. Page: Same objection.

A. No difference that I remember. With one exception. The drawing of the sketch of the two carbons showing the source of light was added to my sketch.

581 Q8. You are referring now to the two carbons shown in Fig. 5 of your patent, are you?

A. Yes.

Q9. Do you know what became of the sketches that you have referred to?

A. They were left with Munn & Co.

Q10. Do you know whether or not they are in existence today?

A. I do not.

Q11. What assistance did you have from the work of anybody else in moving picture cameras or projectors in devising the feeding mechanism shown in your patent?

Mr. Page: Objected to as irrelevant and immaterial.

A. I had no assistance except the general knowledge of what was required in improvements of such machines.

Q12. You have said that except for the arc lights shown in Fig. 5 your sketches showed every feature of construction shown in the drawings of the patent. Will you state a little bit more fully and in your own words just what you can recollect as to the kind and number of sketches shown your attor-

neys and just how much in detail the various mechanisms were shown on these sketches?

A. As I remember it I sketched about all that were used in the application. Details such as gears, cogs, were probably not shown in my sketches.

Q13. Do you recollect whether or not on your sketches you showed the roller n' and the similar roller referred to in the specification as n , although the drawing does not show the reference letter properly applied, and which rollers bear on the surface of the film of the two reels? 584

A. Why yes, they must have.

Q14. What did you provide these for?

A. For measuring off the required length of film for one picture.

Q15. I do not find any claims in your patent to the feeding mechanism, that is to the various parts of the feeding mechanism, including the continuously moving rolls n and n' . Do you recollect why such claims were not made?

Mr. Page: Objected to as irrelevant and immaterial. 585

A. I considered that the common practice and therefore adopted it.

Q16. That is, with what you knew of mechanisms you did not suppose that would be a patentable thing, is that what you mean?

Mr. Page: Same objection, and also objected to as leading and suggestive.

A. That is what I mean.

Q17. How long before you took your sketches to your attorneys, Munn & Co., was it that you had thought of the feeding mechanism with the inter-

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Robert D. Gray.

mittently moving device and the two continuously moving devices and had made sketches showing the idea?

A. I would say about two months.

Q18. At the time that you filed your application for a patent had you seen any moving picture camera or any description of a moving picture camera?

A. Yes.

Q19. What camera?

587

A. If you refer to a taking camera, I had not seen one. I had seen a kinetoscope. That is the only one that I know the name of.

Q20. Are you referring to the machine that is known as the Edison kinetoscope?

A. Yes.

Q21. And was there nothing else in the way of either a camera for taking moving pictures or a projector for projecting moving pictures that you had known about at that time?

588

A. Of course, I had seen machines used experimentally perhaps, but not in public exhibition. I knew they flickered and the object of my invention was to prevent the flicker.

Q22. Will you state anything you may now remember of any machines of this kind that you may have seen used experimentally—I mean before you made your application for a patent?

A. Well, I have no memory of any particular machine that I could name or where I saw it. I was in Berlin, I am not sure about the dates, I think it was in 1895, and saw exhibitions of moving pictures there. But cannot say where my ideas really originated.

Q23. Are you or not sure whether you recollect definitely that what you saw in Berlin was before

or after the date of your application, March 9th, 1895?

A. I am not sure.

Q24. Did you ever meet one Latham in anything connected with moving picture apparatus?

A. No.

Q25. Did you, before you filed your application for patent, know or hear anything with reference to any camera built by him?

A. No.

Direct examination closed.

590

Cross Examination by Mr. Page:

XQ26. Have you ever taken out any other patents for photographic apparatus beside this one?

A. Yes.

XQ27. Was one of these patents for a camera?

A. Yes.

XQ28. Was it prior to this one that you have been examining to-day?

A. Yes. Two or three, prior to that.

XQ29. Did those cameras ever meet with any practical success?

591

A. Yes.

XQ30. Did you sell those patents or try to sell them to any one?

A. Yes.

XQ31. To whom?

A. Carl P. Stirn. I understood that his brother who manufactured one of them on a royalty in Germany netted \$50,000 on it. That was the concealed camera.

XQ32. Were you a photographer or in the business of manufacturing photographic instruments in 1895?

592

Frederick C. Beach.

A. I was manufacturing photographic lenses.

XQ33. Did you not at one time manufacture or make experimentally a camera which did not prove a success practically?

A. No. Of course, I have invented things that were not a success, but the two that I had patented were used successfully, sold successfully.

XQ34. They were patented in this country, were they not?

A. Yes.

593

Cross examination closed.

Deposition closed.

Signature waived by consent.

FREDERICK C. BEACH, being duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

594 A. Frederick C. Beach; 63; Stratford, Conn.; patent attorney.

Q2. You are one of the firm of Munn & Co., are you not, Mr. Beach?

A. Yes, sir.

Q3. How long have you been a member of the firm of Munn & Co.?

A. Since December 31st, 1895.

Q4. And before that were you connected with Munn & Co., and if so, how long?

A. Yes, sir. I am connected with it since 1877.

Q5. I hand you a copy of patent to Gray, 540, 545, dated June 4th, 1895, and filed in the Patent

Office March 9th, 1895, and ask you whether you have any means for determining who prepared that application and when it was brought to Munn & Co. by the inventor?

A. The application was prepared by Mr. George M. Hopkins and the record on our book shows that it was received on February 23rd, 1895.

Q6. Are you the one who is in responsible charge of these books?

A. I am.

Q7. Will you please produce your book showing the entries with reference to this Gray application and read upon the record such parts of this record as show what was done prior to the filing of the application?

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A. On page 611 of the record under date of Feb. 23rd, 1895, it is recorded that Robert D. Gray paid cash \$25 as the first fee. On March 6th, 1895, it is recorded that the second fee of thirty dollars, \$30, was paid. On April 19, 1895, the application was recorded as having been first rejected. On April 16th, 1895, the word "pro" indicates that the case had been amended and sent to Washington. On May 3rd, 1895, it had been amended and sent to Washington a second time. On May 9th, 1895, it is stated the application was allowed, and on May 10th, 1895, the final government fee of \$20 was paid. The Serial Number of the application is shown on the record as 541,135, and the number of the patent as shown on the record is 540,545.

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Q8. Will you state if you know whether the man who actually kept this book at that time is alive or not?

A. He is not.

Q9. Was it the regular and established method of conducting your business at that time to enter

every application in your books in the same way as this Gray application was entered?

A. It was.

Q10. Following this regular and established custom what would be the date at which Munn & Co. received the information from the inventor necessary to prepare the drawings?

A. The date of the Book, Feb. 23d, 1895.

Q11. Is Mr. Hopkins to whom you have referred alive or dead?

A. He is dead.

Q12. Are the papers in the application file of Gray and the application itself in existence?

A. They are not.

Q13. Will you please state why they are not in existence, if you know?

A. It is our custom not to retain the correspondence and files more than ten years.

Q14. So that they have been destroyed in accordance with that custom?

A. Yes.

Q15. Who made the drawings for the Gray application?

A. Herbert Walker.

Direct examination closed.

Cross Examination by Mr. Page:

XQ16. Aside from the items which you have read from this book and the information there disclosed, you know nothing whatever about the circumstances attending the filing of the application for this patent, do you?

A. I do not.

XQ17. You therefore know nothing as to what

information Mr. Gray imparted to any one connected with your firm or when he imparted that information, do you?

A. I do not.

Deposition closed.

Signature waived by consent.

HERBERT WALKER, being duly sworn, deposes and says, in answer to questions by Mr. Eyre, as follows:

602

Q1. What is your name, age, residence and occupation?

A. Herbert Walker; 54; draftsman by occupation; Tenafly, New Jersey.

Q2. With whom are you connected as a draftsman and for how long?

A. I am connected with Munn & Co., and I have been in their employ since 1889.

Q3. Please look at the copy of patent to Gray, 540,545, which I hand you, and state whether you recognize these drawings?

A. I recognize these drawings as having made them.

Q4. State what you recollect as to how you obtained the necessary information to make these drawings?

A. I remember sketches having been brought to me from which these drawings were made.

Q5. Do you remember whether or not those were sketches made by some one connected with Munn & Co., or whether they were made by the inventor and his representatives?

604

Herbert Walker.

A. To the best of my recollection they were sketches made by some one not connected with Munn & Co. I have no recollection of sketches made by any one connected with the office.

Q6. Did you from those sketches receive all the information necessary to enable you to make those drawings?

A. I have a recollection of conferring with Mr. Hopkins about the drawings while I was making them.

605

Q7. Have you any further recollection, if so, so state it, as to what was shown on these sketches that you worked from?

A. No; since the time I have no recollection. Could not state anything clearly.

Direct examination closed.

Cross-examination waived.

Signature waived by consent.

606

Defendant's counsel offer in evidence the French patent to Marey, No. 231,209, dated June 29th, 1893, also French to Carpentier, No. 246,246, dated March 30th, 1895, with certificate of addition, dated April 27th, 1895; also United States patent to Casler, No. 669,495, the application for which was filed Feb. 26th, 1896, and the same are marked respectively "Defendant's Exhibit, Marey French Patent 231,209"; "Defendant's Exhibit, Carpentier French patent 246,246," and "Defendant's Exhibit, U. S. Casler patent 666,495."

It is stipulated and agreed, subject to correction, that the effective date of the Car-

pentier patent is between the 11th and 19th day of April, 1895, and that the effective date of the certificate of addition is between the 22nd and 28th of August, 1895, and that for the purposes of this case the Marey patent may be considered as having an effective date of 1893. It is further stipulated and agreed that the Casler patent last put in evidence was the one the application for which was in the interference involving the application for the Latham patent in suit and the application for Armat patent 673,992.

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Defendant's counsel produced and shows to complainant's counsel a book of clippings containing what appears to be a news article in the Baltimore Sun of October 3, 1895, and it is agreed that a typewritten copy may be made of this and offered in evidence and, subject to correct, that such typewritten copy may be accepted with the same force and effect as if a duly proved copy of the Baltimore Sun of said date were offered in evidence with the article in question contained in it. In accordance with the stipulation defendant's counsel offers in evidence a typewritten copy of said clipping, and the same is marked "Defendant's Exhibit, Baltimore Sun, Article of October 3, 1895."

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Defendant rests.

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Charles E. Chinnock.

UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,

Complainant,

vs.

611 INDEPENDENT MOVING PICTURES COMPANY OF AMERICA,

Defendant.

} On Latham
Patent No.
707,934.

Further testimony taken on behalf of defendant pursuant to an order of court to be entered to-day permitting the re-opening of the case before JOHN A. SHIELDS, a Standing Examiner of this Court at the offices of Kenyon & Kenyon, 49 Wall Street, beginning at 11 A. M., Tuesday, May 9th, 1911.

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Present:

PARKER W. PAGE, Esq., counsel for Complainant.
RICHARD EYRE, Esq., representing Kenyon & Kenyon, counsel for Defendant.

CHARLES E. CHINNOCK, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Charles E. Chinnock; 66 years; residence 157 Sixth Avenue, Brooklyn, N. Y.; occupation, electrical instruments.

Q2. Will you please state your present occupation a little more fully?

A. I am manufacturing and selling inventions of my own of the omnigraph. It is an instrument teaching and perfecting those interested in telegraphy. I have been in this business for ten years.

Q3. Have you ever been connected with the moving picture business?

A. I have.

Q4. Will you please state briefly and simply in a general way what your connection with that business was and during what period?

A. In the spring of 1894 I saw an Edison kinetoscope. It occurred to me then that it would be a very good business for me to take hold of in view of the fact that I had just abandoned or given up a business. In the summer I met a Mr. Maltby, a friend of mine, and he stated to me that he had a machine shop and that he made models of machines of different kinds and he would like me to give him some work. I told him that later on I probably would have something in his line, having in my mind the moving picture business. He then gave me the address of the machine shop, Columbia Heights, near Fulton Ferry. Before going away for the summer at Madison, N. J., I visited Mr. Maltby's shop to see if he was fitted up properly to manufacture or make a model. Shortly after June or July I went to Madison for the summer. I immediately started in making drawings and sketches of an apparatus for taking pictures with the idea of showing them in a kinetoscope that I had partially figured out. I left Madison some

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time in September, although I had visited New York once or twice a week before I left Madison permanently. In Sept., the latter part, possibly the early part, but certainly before October, I showed my sketches and drawings to Mr. Maltby and asked him to start in with the work and to give me a competent man and also arrange to have this man helped so as to expedite work. Within two months after I brought the drawings to the Maltby shop I had a finished camera, tested and ready to take pictures. I sent this camera to the home of a Mr. Milliken at East New York. It remained there possibly two days, my idea being to take a subject at his house. I looked over the ground very carefully and found the place was too well built up to give me the proper room and the proper light. I then hunted up a small deserted shanty or shack a short distance from this house and within two or three days of that date I took a set of pictures, consisting of a boxing bout, the principals being Mr. James Lehey and Mr. Robert Moore. These pictures were taken the latter part of November or the beginning of December, positively before Christmas, 1894. The pictures were a success in every sense of the word and I showed them in motion on a temporary kinetoscope. Probably 40 people saw these pictures before Christmas day or including Christmas day, 1894. Sometime in December I sold a camera. In the beginning of 1895 I started making kinetoscopes and also additional cameras. In '95 my brother came in as a partner in the business. We then started and put kinetoscopes on the market and they proved a wonderful success. About May, '95, I had finished two other cameras. Our business increased very rapidly during '95, but in '96, the beginning of '96 it started to

fall off; lack of subjects, lack of interest on the part of the public, dissatisfaction on the part of my brother, the advent of the Mutoscope, caused us to give up the business, probably in the beginning of '97 or the latter part of '96.

Q5. What became of the camera that you had made at the Maltby shop in the fall of '94?

A. It was brought to my house, 157 Sixth Avenue, some time in '95, probably the latter part, since then it was delivered to Kenyon & Kenyon.

Q6. And from the time it went to your house until the time it was delivered to us, where was it? 620

A. In the cellar of my house, 157 Sixth Avenue, Brooklyn.

Q7. When did you deliver it to us, or our representative?

A. I think it was April 15th, 1911. It was delivered at my office and a week later it was removed from my office to 49 Wall Street, Kenyon & Kenyon.

Q8. You have referred to being at Madison in the summer of 1894, were you at Madison any other summer? 621

A. I was not.

Q9. With whom, at Madison, so far as you can remember did you converse about your idea of making a moving picture machine or show the drawings you were making?

A. I was somewhat secretive about showing this invention to strangers, but I did show the drawings and partially explained them to my brother, Mr. E. Chinnock, who visited Madison in August, 1894, to my son, Mr. A. L. Chinnock, to my immediate family, and to some of my relatives who were up there at the time. I cannot now recall any others.

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Q10. Who, if anyone else besides yourself, made any drawings for this machine?

A. I do not know of any one other than myself excepting later on Mr. Maltby or some of his workmen might have made little sketches as the best way to make a certain cam, a certain arm, which usually takes place when you are having a model made in a shop. I have a recollection of talking to my brother, F. R. Chinnock, the one who later on became a partner in the business, telling him in a general way that I had a picture machine and also a kinetoscope with a view to having him know what I was doing. I also mentioned this to a brother-in-law of mine, Mr. James Lahey, who then lived at Madison.

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Q11. There is a mechanism or piece of apparatus on the table before you, is this the machine that you turned over to us last month?

A. It is.

Q12. You have stated that work on this machine began in the Maltby shop in September, 1894. Please state how you fix this date?

624

A. I fix it by the time I left Madison for Brooklyn, my home.

Q13. Can you recall how soon it was after you returned to Brooklyn that the work at the Maltby shop commenced?

A. I returned to Brooklyn on the beginning of September; I visited Maltby's shop immediately after my return. I have a distinct recollection of that because that was the only business I had to attend to.

Q14. Can you now recall the name of the workman who was selected by Mr. Maltby to take up this work for you?

A. A Mr. Pearson.

Q15. When did you last see him or talk to him?

A. Ten or twelve years ago.

Q16. How much of Pearson's time from day to day and how much of your time was devoted to the making of this first machine after you had started at it in September, 1894?

A. All of Mr. Pearson's time and about all my time, and the time of one or two helpers that Mr. Pearson had.

Q17. How frequently were you actually in the Maltby shop during the making of this machine?

A. First off four or five hours a day, later on twice a day, and just about the time the instrument was finished, all the time.

Q18. What, if you know, has become of the drawings that you made at Madison and brought to the Maltby shop?

A. I endeavored to find the drawings and others have helped me, but up to date I haven't been able to find a scrap.

Q19. State, so far as you can now recollect, how fully those drawings showed the proposed machine and so far as you can recollect, what they showed?

A. The drawings showed just so far as the machine was capable of taking pictures, just as it is now before me. It certainly showed the reel for holding the film, the rollers for moving the film steadily off the reel, the gate or clamp for holding the film while the picture was being taken, the take-up reel, the cam, the gears and the general parts that make the machine complete. The little spring that is used to keep a steady strain on the film was not shown that I can recollect now. The size of the spring, the size of the rocker arm, the driving pulley, several minor details I would not be positive were on the drawings. I am absolutely

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certain that the machine as a machine followed the drawing exactly, and my best proof of that is the fact that the machine worked the very first time we tried it.

Q20. You refer to the little spring that is used to keep a steady strain on the film. Please point this out on the machine on the table.

A. It is this spring that I now have my finger on.

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The witness puts his finger on the arm engaging the top of the film near the bottom of the machine.

Counsel for defendant offers the machine that has been identified by the witness in evidence and the same is marked "Defendant's Exhibit Chinnock Camera."

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Mr. Page: The exhibit is objected to as irrelevant and immaterial to the issues of this case and the testimony heretofore given with regard to it is objected to for the same reason. In order not to encumber the record with objections complainant's counsel asks that all testimony to be given with reference to this exhibit may be regarded as subject to the same objection of irrelevancy and immateriality.

Counsel for defendant agrees that the objection may be considered as repeated by counsel for complainant to further testimony given with reference to this exhibit.

Q21. You have spoken of this machine being completed within two months and tested and ready to take pictures. What were these tests and where did they take place?

A. The tests took place in Mr. Maltby's shop and

for the purpose of testing it I used paper, cut to the right width with different thicknesses. I run thousands of feet of this paper, registered it, using all speeds from ten a second up to thirty a second; during these tests I discovered that occasionally the paper would break. A number of the men witnessed these tests, particularly Mr. Pearson, and a suggestion was made that a little spring to keep a steady strain on it; that spring was put in and we would then run the paper off without any damage to the paper, without any break and practically perfect registering. The registering was so good that we actually measured it with a micrometer. I also secured some film and put some film on and tested it. All these tests were completed the latter part of November, 1894.

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Q22. How do you fix this time?

A. I fix it with the time I started it, the rapidity with which the machine was completed or worked at, the time that I took the pictures, the time that I received an order for a camera, by the fact that it was positively finished before Christmas, 1894. the weather and the fact that I told others that it was finished.

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Q23. Will you please now compare "Defendant's Exhibit Chinnock Camera" with the camera that you took pictures with in 1894, that is, with this camera as it was in 1894, and point out any changes, if any, that have been made since, or specify any parts that were on the camera then that may not be there now?

A. I can't see anything on the camera marked Defendant's Exhibit, that wasn't on it when I took the pictures, excepting that there are one or two things missing that were on when the pictures were taken. One of the articles missing, or two, is the

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shutter. Another is the cover that went over the whole machine excepting the driving pulley. Another is the lens. Another is a second pulley for connecting with the pulley that is now on the machine, and I wish to add that when I said one or two, I meant, generally speaking that there were certain parts, there might be more than one or two, in other words, I meant a number of parts.

Q24. Please describe the shutter that was originally on the camera and where it was carried and how it operated.

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A. There is a shaft on the exhibit held in position by two uprights and geared by beveled gear directly to the driving shaft. On this shaft there is a threaded end suitable for holding a nut and it did hold a nut with a threaded washer for clamping the shutters in position. When I say shutter, I use it in the singular sense, when in reality there were two shutters having openings so that they would come exactly opposite one another and were arranged so that you could increase or diminish the amount of light allowed to strike the film per second. I haven't the shutter before me, but my recollection is, in fact I feel almost certain that it had four openings and that one complete revolution would take four pictures.

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Q25. What was the shape and size of the shutter?

A. The shutter was round and the size of the shutter was sufficient to completely cover the opening shown in the exhibit for holding the lens. About twelve inches in diameter.

Q26. Will you now please describe the feeding mechanism of this camera, and how such mechanism operated when you used to use it to take pictures?

A. There was a reel on the upper part of the

camera capable of holding about 200 feet of film, positively 100 feet. This film passed from the reel through a pair of rollers, sufficiently tight to move the film without showing any lost motion. The film then passed in front of the opening for taking the picture, and then passed between two rollers that had a larger diameter and traveled at a faster speed, from there it passed through or under the spring designed to keep a steady tension on the film to a take-up reel that was connected by a belt with the driving mechanism, and was frictionally turned so that it would steadily take up the film without damaging it. There is a gate with an opening in it sufficiently large that corresponded with the size of the pictures. This gate was clamped in by a cam or moved out by a cam and would spring in at certain intervals and hold the film a certain length of time; while these pictures were taken the film was being drawn off the reel and it would then be held while the picture was taken and the film would form a loop or a length which would correspond with the length of the picture. In other words, if you took twelve pictures the twelve pictures would measure twelve inches, or twelve inches and a fraction, whatever the length of the pictures would be. If the pictures were two inches, twelve pictures would make it twenty-four inches.

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Q27. How long, in fact, were the pictures that you took at that time?

A. One inch.

Q28. In what way, if any, do the different reels and rolls and cam, etc., that you have described in connection with this operation of the feeding mechanism differ in the exhibit that we now have in the case from the corresponding parts in the camera as completed in 1894?

A. They do not differ at all.

Q29. You have spoken of this camera being taken, as soon as it was completed, to the house of one Milliken where it stayed for a few days. Who was he?

A. He was one of Mr. Maltby's workmen, or a man who was working in Mr. Maltby's shop.

Q30. How long is it since you have seen or had any communication with him?

A. At least fifteen years.

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Q31. Where and when did you develop the pictures that you took in 1894 of the Lahey-Moore boxing bout?

A. At my home, 157 Sixth Avenue, Brooklyn.

Q32. After you developed these pictures, what did you do with them?

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A. In developing them they were cut in lengths of about 12 inches, each length numbered. We then printed or obtained positives on paper, these papers were numbered to correspond with the film or sections of the film. These pictures were then pasted on a strip of canvas so that they were consecutively connected, they were then put on revolving drum and the kinetoscope effect was obtained by the usual way by the peep-hole and movement of the pictures.

Q33. Why did you cut these into lengths?

A. Simply for convenience. I did not have the facilities for developing a length of film 25 feet, we did not have facilities for printing on a strip of paper 25 feet long, and we had to adapt ourselves to the room we had.

Q34. Was this cutting into strips done with any reference to any inequality of distance between pictures?

A. They were cut just exactly as they came off the machine, in other words, the pictures themselves was the guide.

Q35. What I want to get at is whether you in your cutting ever divided the film at particular places to compensate for irregularity between successive pictures or whether you always cut every 12 pictures simply as an arbitrary rule?

A. We took probably positively a half dozen subjects with that machine that is before me and in no case did we ever measure a single piece of film other than by the registering of the machine or the picture itself.

Q36. You have referred at times to having done certain things certainly before Christmas of 1894, why do you fix that date?

A. For 25 years we have, or I have had a family gathering at my home numbering from 26 up to 30. This particular Christmas, 1894, at least 20 of that gathering positively came; saw the pictures that I had taken previous to December, 1894, of two relatives of the family, one a brother-in-law of mine, and the other a nephew, Mr. Robert Moore, and furthermore these pictures were shown to a Mr. Walter Isaacs somewhere in December and on the strength of these pictures he gave me an order for a camera.

Q37. Whom did Mr. Isaacs represent in the matter of this order?

A. Mr. Hough of London.

Q38. Did you thereafter hear from Mr. Hough himself with reference to that order?

A. I did.

Q39. State the circumstances.

A. Some time in January, 1895, I received a letter from Mr. Hough requesting me to forward the picture machine or camera ordered by him, and finding fault because I hadn't.

Q40. Is this the letter you refer to?

A. Yes, sir; that is the letter.

Q41. Did you receive this in the ordinary course through the mails?

A. I did.

Defendant's counsel offers in evidence the letter just identified by the witness and the same is marked "Defendant's Exhibit, Hough Letter, Jan. 15, 1895."

Q42. Where, if you can recollect, did you obtain
647 the film that you used in testing the camera at the Maltby shop and afterwards in taking the Lahey-Moore boxing bout pictures?

A. I tried to locate the place where I got this film but up to the present time I am unable to do so.

Q43. Do you recall where you got any film thereafter and if so state so far as you can recall the circumstances of that purchase and just what you did purchase?

A. As soon as I was satisfied with the working of the camera I ordered a quantity of film some time in January, 1895, the beginning of January. I might have asked for information of film in quantities, before January, but I did order film through a Mr. Charles Smith, a photographer, Park Row, N. Y., believing that he could do much better than I could from the Eastman Co., Rochester, N. Y. I received this film some time in the beginning of January, and used it at a laboratory which we had fitted up at 1721 St. Mark's Avenue, East New York, Brooklyn, N. Y.

Q44. Do you recollect approximately what you paid net for this film.

A. I do. Between 50 and 60 dollars.

Q45. I now hand you a photograph and ask you to state whether you can recognize the subject of this photograph and whether you can identify any of the persons shown therein.

A. This is evidently a photograph of Mr. Maltby's shop. I only recognize the shop in a general way. I recognize positively Mr. Maltby, whom I have marked in red ink with the numeral 1. I recognize a Mr. Hollman, whom I have marked 2 in red ink. I recognize Mr. Milliken, whom I have marked in red ink 3. I am unable to recognize any of the others, although they may have been there. 650

Defendant's counsel offers in evidence the photograph just identified, and the same is marked "Defendant's Exhibit, Photograph Maltby Shop."

Recess.

Q46. Who was the Mr. Hollman, you recognized in the photograph?

A. He was one of the partners of the Maltby Mfg. Co. or Maltby Machine Works.

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Q47. At the time the camera was made?

A. At the time the camera was made.

Q48. Is the Milliken whom you identified in the photograph the one to whose house your camera was taken immediately after completion?

A. He was one of the workmen at the time the camera was made. He is.

Q49. You have spoken of your interview with Mr. Isaacs and the sale of camera at that time. When was this camera delivered?

A. June, 1895.

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Q50. Will you please state any further circumstances leading up to the delivery of that camera in June, 1895?

A. Some time in December, 1894, either Mr. Walter Isaacs visited me or wrote me, the result of which caused us to have an interview. I visited his home and showed him some pictures that I had taken of Robt. Moore and James Lahey, and about four or five days later he visited my home and gave me an order for a camera at a price, and as I remember he did not state at that interview who this camera was for.

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I received a letter through the mail in the beginning of January from the party I have already mentioned, Mr. Hough, calling on me to deliver this camera. Some time in May I received a visit from Mr. Hough and Mr. Werner, and I also think that Mr. Isaacs was present, and a contract was drawn up after they had satisfied themselves that I really could take pictures and had a satisfactory camera, as this camera had already taken pictures of Mr. Hough and Mr. Werner in a scuffle on a stage, and these pictures had been shown them and tested, they gave me an order for two cameras and ten kinetoscopes and paid me \$1,000 cash on account.

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Q51. I hand you a paper and ask you whether you can identify it; if so, what it is?

A. I do identify it as being the paper I referred to in my previous answer.

Q52. Do you know in whose handwriting the body of this paper is in?

A. I do. It is my son's, A. L. Chinnock.

Q53. Is it your signature that appears at the end?

A. It is.

Q54. When was this paper signed by you and by the others whose signatures appear thereon?

A. The 3rd day of May, 1895.

Q55. Did you see the other signatures attached to the paper at the time?

A. I did.

Q56. Please state whom you saw sign this paper?

A. James E. Hough, Michael Werner, J. W. Lahey, Walter Isaacs. I am not so positive about Walter Isaacs, although I feel quite sure he was there.

Defendant's counsel offers in evidence the paper produced by the witness and the same is marked "Defendant's Exhibit, Agreement between Chinnock & Hough & Werner."

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Q57. At the time this agreement was signed had you made or commenced any other cameras besides "Defendant's Exhibit, Chinnock Camera"?

A. I had not so far as I can recollect.

Q58. You have stated that a camera was delivered to Hough in June. Was the other photographic machine or camera required by this contract delivered?

A. It was.

Q59. To whom was that delivered and when?

A. That was delivered to Mr. Michael Werner about the same date, within a day or two, possibly the same date.

Q60. Where was Hough and Werner at that time?

A. In New York. Mr. Werner was at an uptown hotel. I cannot remember at this moment the name. Mr. Hough I did not see at the time the camera was delivered. It may have been delivered to Pitt and Scott for Mr. Hough. I made a mis-

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take just now in stating that Mr. Hough was in New York. My recollections are that the camera for Mr. Hough was delivered to Messrs. Pitt & Scott and that he at the time was in London. When I stated Mr. Hough and Mr. Werner were both in New York at that time, it had reference to the time the contract was made. The camera was delivered to Mr. Werner in person or his representative and \$150 was collected at the time it was delivered. Mr. Werner's camera was carried over to New York by Mr. James Lahey and delivered, I feel quite certain, to Mr. Werner in person or to a representative of his.

Q61. Were you informed at the time where these gentlemen resided and where they expected to use the camera?

A. I was.

Q62. Please state what your information was in these respects?

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A. I understood from Mr. Hough that the camera that he purchased was to be used in England and the camera that Mr. Werner purchased was to be used in France. I also understood from them that they had been making great efforts to get a camera and had failed.

Q63. How closely did the camera that you sold Werner and Hough resemble your first camera?

A. They were identical with a few minor changes, one of them being an interior cam, that is to say, a cam that moves the rock arm governing the gate that held the film instead of having the cam move the arm one way and the spring the other.

Q64. That is, in these two cameras the clamping and unclamping were both done by the cam instead of having a cam doing the unclamping and the spring doing the clamping as in the exhibit.

A. That is the only material difference.

Q65. Did you have in the other cameras the same two reels, two sets of positively driven rolls at opposite sides of the gate or clamp and the loop formed above the clamp, as shown in the exhibit?

Mr. Page: Objected to as leading.

A. They did.

Q66. When and where were these two cameras made?

A. At the Maltby shop, between the beginning of '95 and the date of delivery. They were started immediately after the order was received and they were rushed through in the shortest possible time as I was under contract to deliver them at a certain date. My recollection is that it took about three weeks to complete them.

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Q67. Did you make and deliver the ten kinetoscopes called for by the contract?

A. I made them, but I did not deliver them.

Q68. When did you first complete one of your kinetoscopes?

A. I think I had a complete kinetoscope about March, 1895; this kinetoscope was the duplicate, or was a sample from which all other kinetoscopes were made. I had a rough skeleton that I had rigged up myself, partly in '94, November, but a complete model I fix the date at March, '95.

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Q69. Where did you make your kinetoscopes in '95?

A. In the Maltby's machine works.

Q70. You have spoken of taking pictures at St. Marks Avenue, East New York, Brooklyn. What was this place?

A. It was a one story building, situated in the

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rear of a house about 25 feet by 60, possibly 50, and was fitted up with a stage on the roof with a fence around it with a small house for use when we had the camera in position, and was also fitted up with appliances for developing, printing and testing the camera, kinetoscopes and in fact it was the laboratory complete and also a stage suitable for taking subjects.

Q71. When did you arrange to get this place, and when did you fit it up in the way you have described?

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A. We had secured the place the latter part of 1894, or it might have been the early part of '95; we fitted it up immediately and took subjects in January, '95, and went into the manufacture of kinetoscope subjects.

Q72. Do you recall any of the subjects of the pictures taken at the St. Marks Avenue place in the first half of 1895?

A. I do. Ruth Dennis, Clafflin Sisters, they were professional dancers; May Jewell, two professional boxers, cock fight, Werner & Hough, the couchee couchee, and some others that I cannot just at this moment recall.

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Q73. When did you get your kinetoscopes on the market and how did you market them?

A. The first kinetoscopes that I have any positive recollection of regarding commercial use was put in Val Schmidt, a saloon on Fulton street, near the bridge, Brooklyn; in three days this instrument took in \$40. The next two that I am positive about were two that we placed at Canarsie, a summer resort. These two were in June, '95. These machines took in \$40 or \$50 in an afternoon. We placed one in Gerkens, a cafe, corner of Church and Courtlandt streets. In '95

we put out a large number of kinetoscopes. I can't recall just where they were placed. I think I have a record of quite a number of them in writing.

Q74. Is this book which I now hand you the record you refer to, and if so state what it is and who kept it?

A. This is the record I refer to, and shows some of the instruments that were in use in the early part of '95 up to the date shown in here. It is a receipt book showing the amount collected. When we first put kinetoscopes out we did not have a book of this kind. We only discovered the necessity of this afterwards. This book was carried around by Mr. James W. Lahey, and writing, as far as I am able to judge, is his, and I identify it as being a book that I have seen many times.

Defendant's counsel offers the book in evidence and the same is marked "Defendant's Exhibit, North American Kinetoscope Co. Receipt Book."

Q75. I see that these receipts are marked as being from the N. Am. Kin. Co. or similar abbreviations. What did such abbreviations stand for?

A. North American Kinetoscope Co.

Q76. What was the North American Kinetoscope?

A. It was a partnership consisting of myself and F. R. Chinnock, my brother.

Q77. I now hand you what appears to be a type-written agreement, can you identify the same; if so, what is it?

A. It is an agreement between my brother and myself, and it is the terms upon which we both

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agree to carry on the business of the North American Kinetoscope Co.

Q78. When was this agreement signed by yourself and your brother?

A. The 25th day of May, 1895.

Defendant's counsel offers in evidence the agreement in question and the same is marked "Defendant's Exhibit, Chinnock Agreement."

671 Q79. Was this date the first connection your brother had with you in this business?

A. It was not.

Q80. Please state how long he had had any connection with you in this business and what that connection was.

A. I had talked the matter over with him several months before and continued to talk the matter over until the date of the agreement. In fact, he had made an advance of \$500 before this agreement was signed. He had seen the pictures and had seen the kinetoscope and was familiar with what

672 I was doing several months before this date, May 25th, 1895. And on the strength of what I had done and what I was doing he went in with me.

Q81. Up to the time when you had completed the other two cameras, the ones for Hough and Werner, what other camera, if any, except Defendant's Exhibit, Chinnock Camera, had you used for taking pictures for your commercial kinetoscopes?

A. No other.

Q82. How long did you continue to use Defendant's Exhibit, Chinnock Camera, for taking pictures for your business?

A. Certainly up to July, 1895, and possibly longer.

Q83. When did you have other cameras for use in your business?

A. Not until 1896, although it is barely possible that I might have had another one the latter part of 1895.

Q84. Were you taking pictures in 1895 after July, do you know?

A. We were.

Q85. Are you able to state what camera you were using for that?

A. Using the same camera.

Q86. That is, "Defendant's Exhibit, Chinnock Camera"?

A. Yes.

Q87. Whom do you recall as being present when you took the Lahey-Moore pictures in 1894?

A. Mr. James Lahey, Robert Moore, myself, and I have heard since that there were a number of others. There was a house quite near and I remember quite a number looking at us while we were manipulating this subject, whether you would consider them present or not I do not know.

If they were present, there were a number of others. My mind was so positively concentrated on this first attempt that I did not even know until afterwards that a policeman was present, or that a policeman had been investigating what we were doing and stated that he did not know but that we were counterfeiters. I had told quite a number that I was going to take pictures and I had told them where I was going to take pictures. I have a dim recollection that my brother promised to be out there, Mr. F. R. Chinnock, and one or two others promised or said they would be out there.

Q88. Prior to this development of your camera

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had you ever made any inventions and obtained patents in other arts, and if so, to what extent?

A. I have taken out a number of patents, principally in the electrical line, one of them being a chronometer time lock used by the Government and banks, a spinning jenny for suspending cables, a telephone transmitter, switchboards for the telephone exchanges, a special call for telephones, telephone switchboard, electric light ammeter for central stations, telephone cable and a number of others that I cannot at this minute recall.

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Direct examination closed.

Cross Examination by Mr. Page:

Cross examination subject to objection.

XQ89. Will you please describe the kinetoscopes in which you exhibited the pictures that you took in 1894 or 1895?

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A. The kinetoscope was modeled after the plan of the kinetoscope that I saw as a boy with the exception that my kinetoscope had photographs, whereas the others that I refer to were simply painted. My kinetoscope consisted of a drum mounted on a shaft, the shaft having a groove cut longitudinally from end to end and a cross reversed groove cut from end to end that forced the drum to travel from end to end and then back again to the original position. On this drum was wound a canvas having on the face of it the photographs. The canvas was laid out by a straight edge before the pictures were mounted or pasted on this canvas so that the pictures corresponded to the groove cut in this shaft, that is to say, No. 1 picture would run spirally around this drum and

would be an inch wide and the groove in the shaft was an inch wide, consequently when the drum started to revolve and the peep hole revolved in the reverse direction each picture would come before the eye just as they were taken on the canvas and would show perfect movement of the subjects. As soon as the last picture was shown the light was extinguished automatically and the drum returned to its original position.

XQ90. I gather from your description that you had a drum which was rotated around a shaft and was moved longitudinally along the shaft by engagement with a spiral groove cut in the shaft, is that correct?

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A. That is correct.

XQ91. And was there some device equivalent to a shutter that cut off the pictures from view except at the moment when each particular picture came opposite to a peep hole.

A. There was.

XQ92. By the simultaneous rotation and longitudinal advancement of the drum the pictures mounted spirally on the drum were brought successively opposite to a peep hole and at that instant were exposed to view, is that correct?

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A. That is correct.

XQ93. What was the diameter of these drums?

A. About 18 inches.

XQ94. And what was the length of the drum or the space on the drums occupied by the pictures?

A. 50 feet of film an inch wide, each picture an inch long.

XQ95. That would make the length of the drum or the portion which was covered by the pictures about how many inches?

A. About 18 inches or two feet. I do not know

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just exactly. I am figuring it out by a mental process. I can verify it. Generally it was sufficient to show 50 feet of film, the pictures one inch wide and an inch long.

XQ96. The light was produced by what source?

A. Electric light.

XQ97. And it was burning continuously during the forward movement of the drum but intercepted by the shutter?

A. Intercepted by the shutter.

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XQ98. Was the shutter in the form of a cylinder, or how was it arranged?

A. In form of a cylinder, a duplicate of the drum, only larger in diameter, and very much narrower in width, the width being sufficient to cover the eye so that it would be possible only to see one picture at a time looking at it naturally.

XQ99. This shutter revolved at the same rate of speed as the drum, did it not?

A. It did. Making allowances for the difference in diameter.

XQ100. What was the width of the canvas strip on which the pictures were mounted?

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A. About 15 inches, possibly 18.

XQ101. And were the pictures pasted on this canvas in a spiral line?

A. They were.

XQ102. Was the canvas mounted or pasted to the drum before the pictures were mounted on it?

A. It was not.

Counsel for defendant in view of the cross-examination thus far deems it possible that counsel for complainant may be able to produce one of the Chinnock kinetoscopes and if he can it is requested that he do so.

Counsel for Complainant replies that he does not know where defendant's counsel got such an impression, for not only is counsel for complainant unable to produce such a device but he is trying to find out what that device was if it ever existed.

XQ103. Was it mounted on a temporary drum or form before the pictures were pasted on it?

A. It was not.

XQ104. Won't you please tell the court how it was that you got the pictures on it in spiral lines so that when it was finally mounted on a drum they would be brought successively before the peep-hole?

A. The piece of canvas the proper length, a little wider than the pictures, a little wider than the total number of pictures that was to go on it, was soaked in water, dried and went through a regular shrinking process. We had a special board made true on its edges and the ends at right angles specially prepared so that it was practically water proof, this canvas was tacked on this board, a pencil line drawn longitudinally another pencil line parallel with this line the right distance apart, a pencil line drawn at right angles, another pencil line parallel with this the right distance lengthwise. With a pair of dividers the exact width of the strip that we intended to paste on, we made dots on this line that was at right angles to the line that was longitudinal so that this line was divided off into the necessary number of equal parts, each part corresponding with the width of the picture. The same number of divisions plus one was laid off on the line parallel with this line that I have referred to above, that is the distance

that one strip of the drum would occupy. A straight line was placed on one dot and then touched the dot below excepting that it was one inch out of right angles so as to make the proper spiral. A sufficient number of these lines were drawn on this canvas to correspond to the number of strips that would go around the drum. No. 1 pictures on No. 1 strip was then pasted on this line, then No. 2 strip, No. 3 strip, No. 4 strip, until the line was filled up with pictures. This continued until all the subjects was pasted on this

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canvas. The canvas was then taken off and metal ends put on each end of this strip of canvas and these metal ends were placed on the drum so that it brought the pictures close together and formed an exact duplicate spirally wound on this drum to correspond with the spirally cut groove on the shaft of the kinetoscope proper. Of course it is understood that the first or skeleton kinetoscope that I had made and had shown pictures on did not go through this whole process as described by me.

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XQ105. Then as I understand it the strips of pictures were pasted diagonally in a flat canvas strip of exactly the number of inches of the circumference of the drum and this canvas strip after receiving the pictures was laid around and secured to the drum so that the end of the first strip of papers registered with the beginning of the second strip and so on, thus forming a continuous spiral strip of the successive pictures, is that correct?

A. That is correct.

XQ106. The pictures, I mean the positives or prints, were on strips of paper about one inch wide?

A. That is correct.

XQ107. And what was the width of the spaces if any between the successive pictures?

A. Hardly perceptible.

XQ108. That is to say, there was no perceptible portions of the original film which were unexposed?

A. The intention was to have the pictures join. Occasionally there might be a picture that had a fraction of space between it, but that was compensated for by the next picture which would lap just that much as we had lost before. That of course was occasioned by the mechanism of the camera.

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XQ109. After you had exposed a strip of film in the camera into what lengths did you cut up the film before developing? I am referring now to the photographs which you took in the latter part of '94 and the early part of '95?

A. About a foot.

XQ110. Was this practice continued in your later work?

A. It was.

XQ111. Did you cut the strip of film before it was immersed in the developing bath?

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A. I did.

XQ112. Did you cut it in equal lengths?

A. I did so far as the pictures guided me and my recollection is that they were of equal lengths. In other words they were not measured, excepting by the registering of the instrument.

XQ113. How could you tell where to cut the film; what register marks did you have?

A. The picture itself, even the picture lapped it showed a hair.

XQ114. Do you mean it showed before it was developed?

A. Certainly. If you study the Chinnock Ex-

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Charles E. Chinnock.

hibit you will see that it registers on the film itself, where you can cut it, and as regards the mark of the picture, I had for the moment forgotten that fact. The only way of cutting with my system was by the registering of the instrument as it shows on the side of the film, not where the picture is taken, but after the picture is developed then it shows even though the picture has lapped a hair, and the registering does not in any way affect the picture.

695 Adjourned to 11 o'clock.

New York, N. Y., May 10th, 11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

Continuation of Cross Examination of Witness
Chinnock by Mr. Page:

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XQ115. Will you now explain with reference to the Chinnock Exhibit how you were enabled to cut up the film after it had been exposed before the pictures had been developed without cutting through the pictures?

A. The lower rollers have a tendency to pull the film down all the time, and the only time that the lower rollers do not pull the film down is when the film is held by the gate that is operated by the cam, at that moment the rollers slide on the outside edges of the film and will make on a new film or on any film a mark that will be discerned if carefully looked for. Knowing the distance between the picture and mark, it is a very simple matter to cut be-

tween pictures and to cut it into equal lengths without having the developer touch the film. So many marks meant so many pictures.

XQ116. These marks made by the lower rollers are all at exactly equal distances from one another, are they not?

A. If the machine turns steadily and is in proper order they are.

XQ117. But the pictures themselves may show a slight space between them and overlap at the other side to compensate for the space, may they not?

A. The space shown between the pictures is governed entirely by the gate that is clamped by the cam. And as I said before, if the machine is in proper order and is turned at a regular speed there will be no space shown at all unless at such times when the film is not moving regularly.

XQ118. What do you mean by not moving regularly?

A. The apparatus not working as it is intended to work and made to work, being turned unsteadily, proper tension between the lower roller not just what it should be.

XQ119. In an affidavit which you have made in this case you state that the tension between the upper rollers was made strong so that there would be a uniform feeding of the film under this heavy pressure between the rollers even though a film had to be fed which had portions where two lengths were spliced together. Will you explain that statement a little more fully?

A. The only way that I can explain that now is assuming that the rollers might force it together or would take out any little buckles or inequalities to make flat surface and wouldn't feed one side of the

film more than the other. In other words, the idea is to have the roller so tight that it will feed regularly, notwithstanding that the film might vary or there might be any little irregularity in the film.

XQ120. Do you mean that a pair of friction rollers drawn together by heavy pressure of the tension spring would feed at the same rate films of different thicknesses?

701 A. Do you mean by that that the film would vary in thickness or that it is the same thickness all the way along or that it is thick in one place and thin in another?

XQ121. To save questions I will ask you to consider each of the cases which you mention and to answer the question with that understanding?

A. If the film is of varying thickness a roller such as you have described would not feed as far as I know at this present moment exactly the same for every fraction of an inch. If the film was of uniform thickness it would feed uniformly although it is possible that it would creep a little.

702 XQ122. Why did you make the spring pressing the lower rollers together lighter than the spring pressing the upper rollers together?

A. So as not to damage the film.

XQ123. Why are the lower rolls made of larger diameter than the upper rolls and why are they driven at a higher peripheral speed?

A. They have to pull a certain amount of film down, the amount that has been reeled off by the upper rolls, and they have less time to pull it down in, consequently they must be very much larger in diameter and driven at the same speed, or they must be reasonably large in diameter and driven at a greater speed.

XQ124. Do you know what the relative periph-

eral speeds of the upper and lower pair of rolls is?

A. I do not. That can easily be ascertained. I did know, but I have forgotten.

XQ125. Do you remember that the ratio is about 9 to 4?

A. I do not.

XQ126. You have stated that in some tests of this device before the tension spring was introduced between the lower rolls and the take-up reel, the strip of paper or film which you ran through the machine was sometimes torn. Where did this tearing or breaking occur?

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A. Between the take-up roll and where the spring bore down on the film or paper.

XQ127. You mean that the paper before the spring was introduced was torn close to the take-up reel?

A. Between the take-up reel and the lower rolls, and it was also torn even with the take-up spring on until we had it just right.

XQ128. Is the tension of the spring between the take-up reel and the lower rolls varied by the diameter of the take-up reel, that is to say, as more or less film is wound on the take-up reel, is the spring subjected to greater or less tension?

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A. As the spring is used, it necessarily has more tension as it is pulled up by the film and has a minimum amount of tension when it is in its normal position without having any pressure on it. The moment there is any pressure on it the tension increases.

XQ129. Is this tension varied by the varying leverage of the take-up roll as film accumulates on it?

A. It is 16 or 17 years ago when that was made. At this minute it is absolutely impossible for me

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Charles E. Chinnock.

to tell you in detail just how that tension spring worked with that film and with that reel. I am perfectly willing to run off a film to take the exhibit with me or to do it in your presence and describe everything that that tension spring did. The general answer I would say it worked perfectly.

XQ130. The tension between the lower rolls must never be so great as to pull the film through the upper rolls, must it?

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A. The tension of the lower spring must be sufficient and was sufficient in actual practice to compensate for the loss in creep.

XQ131. I shall have to ask you to explain your answer a little more fully?

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A. The results that I got from this camera proved to me conclusively that the film as a whole did not lose in length as regards the number of pictures taken on that predetermined length. I account for that by the fact that when the loop was formed and when the film is released after a picture had been photographed the frictional rollers pulled it down with a rush and actually aided the upper feed rollers, that is the actual practice of the Chinnock camera now on exhibit.

XQ132. When you say that the lower rollers did compensate for the creep where was the creep, between the upper rollers?

A. Between the upper rollers.

XQ133. Do you mean that a little more of the film passed through these rollers than the circumferential portion of the upper rollers in contact with the film?

A. I mean that it was aided and the result proved that a little more must have passed because it is a well known fact that a film or paper of any

substance passed between rollers cannot gain if everything is equal, that there is what they call a fractional loss caused by creep. I don't know whether that is the proper technical term, but that is the way I understand it. Therefore, ordinarily in running off 50 feet of film there would be a fractional loss if it were not for the fact that the film must have been helped by the lower rollers and the sharp and sudden snap tending to pull the film through the upper rollers. In other words the lower rollers helped the upper rollers.

XQ134. The tension of the spring between the take-up reel and the lower rollers is never sufficient to pull the film through the lower rollers when the cam operated gate releases the film, is it?

A. In actual operation, and when the machine is operated at between 20 and 30 a second, this lower spring made some very rapid gyrations. In fact, I have seen it receive a blow from the paper sufficient to spring it up and it would come down with a blow. That might have a tendency, and probably did, to move the lower rollers a fraction or take up the loss in the gearing of the instrument.

XQ135. What was the greatest length of film that you ever ran through this camera in taking pictures of objects in motion in one operation?

A. 50 feet. I run paper through it very much longer.

XQ136. This film is or was approximately two inches in width?

A. It was.

XQ137. After you had developed the pictures on the film what was done with the unexposed edges, were they trimmed off?

A. They were not.

XQ138. Then, when you obtained positive prints,

712 *Charles E. Chinnock.*

were these trimmed down to the width of one inch?

A. They were.

XQ139. Did you ever experience any trouble with the film passing off from the surface of the feeding rolls and getting between the gearing?

A. I have no recollection in actual practice of having that trouble. I have, though, in the testing of the machine or camera in putting the film in position, have it catch in the gear, which I have remedied by simply putting it down through or in line. I have also made failures with the film, that is to say, when the friction roll was not just right I have spoiled film.

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XQ140. Did you ever experience any difficulty in keeping the film accurately running between the rolls when, by reason of any inequalities in the thickness of the film, a portion of it tended to travel faster or slower than another portion?

A. I have noticed that; my best recollection at this minute is that I had noticed it and attributed it to the working of the instrument, not being properly adjusted or not being turned properly. I cannot say that I ever figured it out as being owing to the inequality of the film.

714 I have never actually calipered the film to find out whether it varied in thickness as to its length or varied in thickness as to width. In fact I never came across a piece of film that I knew was spliced, although I have learned since that they do splice film, and they do it so well that they cannot be detected by the naked eye.

XQ141. Have you any specimens of the film or positive prints of the film that were photographed by means of this camera?

A. For the last three weeks I have made diligent search for a piece of that film and for a strip of

the pictures, particularly the Lahey-Moore bout. I even went so far as to send Mr. Lahey out to East New York, where our laboratory was, and had him interview a Mrs. Steffen who occupied the house on the front part of the lot where the laboratory was situated. She stated that the place was let to a clothing manufacturer and just before he occupied the place all the stuff that had remained in that laboratory after we had given it up was gathered, placed in a lot and was burned, and shortly after the laboratory was burned. Up to six months ago Mr. James Lahey had some of this film of the boxing bout between himself and Robert Moore. I am quite sure that there would be little difficulty in finding one of the strips containing the photographs. Within two years the kinetoscope was on exhibition at Coney Island at the Iron Pier. I can't say just which one now, and after 15 or 16 years was actually working.

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XQ142. You have stated that you used this exhibit camera up to July, 1895, and possibly longer. Why did you discontinue its use?

A. My anxiety to improve it.

XQ143. That is to say you made a better one? 717

A. Tried to make a better one?

XQ144. Did you succeed?

A. To be frank I don't think I did, excepting as to appearance.

XQ145. When did you make this better appearing camera?

Q. Between May or June, possibly July, 1895, and the latter part of 1895. At this moment I cannot fix the date within a month or even two months; by being given some time, I think I could make it closer than two months.

XQ146. After you had made that camera, what

did you do with this one which is now in evidence?

A. Sent this one to my house; just why I sent it there I couldn't state; by a little trouble I could locate the time when it arrived at my home.

XQ147. How long did you continue to take pictures with the other or new camera that you made in 1895?

A. Up to the middle of 1896. Possibly longer, but not longer than the latter part of '96.

719 XQ148. Did you ever apply for a patent on this or any other motion picture camera?

A. No, sir.

XQ149. Did you apply for a patent on your kinetoscope?

A. No, sir.

XQ150. In your affidavit filed in this case you state in referring to the addition of the spring arm between the lower rolls and the take-up reel as follows:

720 "The provision, therefore, of this lower loop or slack controlled by the spring arm was very helpful."

Just what did you mean by that expression?

A. The reel necessarily weighs so much, off hand, I should say a pound. This reel was revolved by a belt and was frictionally connected on the shaft so that if you stopped the reel, the machine would still run, that is the friction would allow it to operate. By having three or four, maybe a dozen convolutions of paper or film on this reel, the take-up would work very nicely, but the weight of this film or paper increased and also the diameter and of course it took more power to revolve it

and as the film was held while the picture was being taken, it might stop the reel short for a moment or a fraction of a second and quite a loop would gather between the lower rolls and take-up reel. The take-up reel would then, owing to the friction, start to revolve and would get quite a momentum on and this momentum was sufficient to jerk things and in some cases would break the film. This take-up spring was suggested by somebody, or it might have occurred to me, at this moment I cannot say. However, we put it on, and after several experiments as to tension, position, shape, it completely and positively cured the trouble. So much so that the first film that I ran off in actual operation was commercially perfect with the pictures on.

XQ151. Did you always operate this camera yourself in taking photographs of moving objects?

A. I did not.

XQ152. Who, besides yourself, used it for obtaining pictures?

A. In the beginning I was my own operator and my own photographer. As soon as we occupied our laboratory and had it fitted up we hired a professional photographer and sometimes I operated the machine and sometimes he did. Just what proportions I couldn't say, but I recollect one case in particular where he operated it, focused it and made a fizzle of a very expensive subject. While the film so far as registering was perfect or commercially perfect, he had failed to properly focus the subject and it was more or less blurred. The film was developed, mounted and used to a limited extent.

XQ153. You bought your film for use in this camera in 50-foot lengths, did you not?

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A. I did, excepting the first two or three films that I used.

XQ154. At what average rate did you take the pictures that you used for exhibition in your kinetoscope?

A. Around 20 a second. Although I feel quite positive that some of the films were run off at a greater speed, possibly 25. And some of them may have been run off at a less speed than 20, but we never had a film, I state this now positively, that showed the slightest indication of a jerky motion.

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XQ155. Did you always operate the camera by hand?

A. Always. Of course you are talking about this camera and duplicate cameras like this.

Mr. Page: Yes.

Direct examination closed.

Re-direct Examination by Mr. Eyre:

RDQ156. Have you ever examined a copy of the Latham patent involved in this suit?

Mr. Page: Objected to as irrelevant, immaterial and as not re-direct examination.

A. I never have.

RDQ157. Have you read any of the affidavits given on behalf of defendant and relating to this camera?

A. I have not.

RDQ158. Have you seen or communicated with anybody that was connected with the Maltby shop within the last few years?

A. I have not. Of course, I met Mr. Edge in here the other day by accident. I simply said, "How do you do" to him.

RDQ159. Have you seen or communicated with Mr. Charles Smith, the photographer, in the last few years?

A. I have not.

RDQ160. When you found the machine in your cellar, did it then have the film in it that is there now?

A. It did.

RDQ161. Do you know whether or not this is a part of a film that you bought through Smith?

A. I do not.

RDQ162. Do you know how long the film now in the machine has remained therein?

A. At least 13 years, if not 14.

Re-direct examination closed.

CHARLES E. CHINNOCK.

CHARLES W. SMITH, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre.

Q1. What is your name, age, residence and occupation?

A. Charles W. Smith; age, 60; residence, 9th Avenue, corner Kalb, Brooklyn; occupation, mercantile photographer.

Q2. How long have you been in the business of mercantile photography?

A. Since 1890.

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Charles W. Smith.

Q3. During the time that you have been in this business, did you ever purchase any film such as the film that is used in connection with the moving picture business?

A. Only that purchased for Mr. Chinnock.

Q4. What do you recall about that purchase?

A. That he came in and asked me to get it for him from Eastman's people, thinking possibly that I might, being in the business, I suppose, be able to make better terms. I don't know that I did.

Q5. What Mr. Chinnock do you refer to?

A. I don't remember his first name. I only know him as Mr. Chinnock.

Q6. He is the Mr. Chinnock who was in this room when you came in?

A. Yes.

It is stipulated that he is the Mr. Chinnock who has previously testified in this case.

Q7. When, as nearly as you can recall, did you make this purchase for Mr. Chinnock?

732 A. That I cannot remember exactly. I do not remember the exact date. It might have been in '93, it might have been in '95, the early part of the year I should say.

Q8. That is, all you can remember is that it was probably the early part of the year and that it was sixteen or eighteen years ago?

A. Yes.

Q9. How is it that you never purchased any such film for yourself?

A. I had no occasion to. I do not do that kind of business.

Q10. What do you remember as to the quantity of film purchased, or its character or cost?

A. Somewhere in the neighborhood of \$50. I paid for it and he paid me.

Q11. What do you recall as to how long it was after you gave the order that you received the film and delivered it to Mr. Chinnock?

A. I could not say, but I would not think over a week.

Q12. The Eastman people to whom you have referred are the Eastman Company of Rochester, New York?

A. Yes.

Direct examination closed.

Mr. Page: Deposition objected to as irrelevant and immaterial and cross-examination waived.

Counsel for defendant states that as the affidavits on the motion to reopen show, this deposition is connected with the case, not only by the previous deposition of Chinnock, but by a deposition to be obtained from the Eastman Kodak Company.

Mr. Page: Notwithstanding the statement of counsel, the deposition is objected to as irrelevant and immaterial.

Signature waived by consent.

Adjourned to May 11th, 1911, at 11 A. M.

New York, N. Y., May 11th, 1911.

11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

CHARLES O. PEARSON, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

737 Q1. What is your name, age, residence and occupation?

A. Charles O. Pearson; 47; 320 East 5th Street, Brooklyn; machinist.

Q2. You are treasurer of the Berggman & Pearson Machine Co., of 221 Canal Street, New York City?

A. Yes.

Q3. Were you ever employed by the Maltby Mfg. Co. of Brooklyn?

A. Yes.

Q4. When were you employed by that company?

738 A. I started in for Maltby Mfg. Co. about September or October, 1894, and I worked for them for something less than a year.

Q5. How do you fix September or October, 1894, as the time when you commenced this work?

A. Because I was working for Pneumatic Torpedo & Construction Co. from about November 1st, 1893, up to that time.

Q6. Is there anything that enables you to definitely fix in your mind the particular years that you were doing work for these two companies, and if so, what?

A. Yes, I remember distinctly that I was out in Hempstead, Long Island, in the bicycle business

during the summer of 1893, and about October I left there and I was out of work for a couple of weeks also before I got the position with the Pneumatic Torpedo & Construction Co.

Q7. What caused you to give up the bicycle business at that time?

A. I gave that up because I could not see enough business to keep me there during the winter.

Q8. What fixes the year as '93 as the one in which you gave up this business?

A. Because I remember that it was a hard year and hard to get work. And besides I bought a house in Buffalo Avenue at about the same time.

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Q9. What was the first work, so far as you can remember, that you did for the Maltby Mfg. Co.?

A. The first work that I done for the Maltby Mfg. Co. was on a camera for Mr. Chinnock.

Q10. Just when, as near as you can place it, did you begin this work? ..

A. To my best recollection, between October 1st and November 1st.

Q11. How steadily was the work on this camera carried on?

A. The work on the first camera was carried right along until the camera was completed.

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Q12. What did you work from?

A. From sketches made by Mr. Chinnock himself.

Q13. When you were building the camera, what, if any, help did you have from Mr. Chinnock?

A. Well, he was supervising the work almost daily.

Q14. What proportion of your time was spent on this camera while it was being made?

A. Practically all the time.

Q15. What help did you have from others in the shop?

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Charles O. Pearson.

A. I had some help to make up detailed parts, just how much I cannot say.

Q16. How long did it take you to complete the camera?

A. I should say about two months, to my best recollection.

Q17. Were any tests made of this camera in the shop after it was completed, and if so, what do you recollect about them?

A. Yes. We were doing some tests, first with paper strips, to see how the camera registered, and later on Mr. Chinnock brought in some films that we run through without taking any pictures.

Q18. Did you build any later cameras for Mr. Chinnock while you were at this shop?

A. Yes, we later on built two, but there was an interval between the first and the two later ones; just how long that was I do not remember, probably three or four months.

Q19. Do you recall anything as to how much alike the later cameras and the earlier camera were?

A. The last cameras were, as far as I remember, exact duplicates of the first with the exception of the cam operating the clamping device, which was actuated in the first camera by a spring and on the last two it was positively controlled by the cam.

Q20. Please look at the apparatus on the desk here before you and state what you can identify about it.

A. Well, I can remember almost every detail that I see on this camera with the exception of the driving pulley. It seems to me that we had a crank instead of the driving pulley.

The witness' attention was called to Defendant's Exhibit, Chinnock Camera.

Q21. What camera is this that you are identifying?

A. I identify this as being the first camera that I built.

Mr. Page: The answer of the witness and all of his previous testimony, which it now appears relates to this Chinnock camera, is objected to as irrelevant and immaterial, and it is agreed that the same objection shall apply to any further testimony to be given with regard to the same.

Defendant's counsel, however, states that he would be glad to be advised as to just what is the specific intent of the objection, in order that he may avoid any question that might be technical. The prior knowledge and use of the Chinnock camera has been included in the answer by an amendment, and presumably therefore it is part of the issue under the pleadings.

Mr. Page: The specific objection is that the camera in evidence is irrelevant and immaterial to any of the issues in this case, and if that objection be sound it is presumable that the testimony with regard to how or when it was made and by whom it was made is equally irrelevant and immaterial.

Q22. You have stated that you remember almost every detail on this camera with the exception of the driving pulley. Will you please describe the feeding mechanism of this camera as you recollect it to have been present in the 1891 camera and specifying how that feeding mechanism acted at that time with your tests with paper and film?

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Charles O. Pearson.

A. The film runs down from a reel mounted on top of the camera, between two feeding rollers over a frame in between the clamp, and it runs back to a lower pair of feeding rollers which travels faster than the upper rolls so that while the clamp held the film tight a loop was formed on the top and when the clamp is released the loop was taken up by the lower rollers, and then it was fed on to another reel mounted on the lower part of the camera.

749 Q23. What do you recollect as to how the reel mounted on the lower part of the camera was driven?

A. By a small round belt that would slip and only take up the film as it was fed.

Q24. You gave your last answer without looking at the exhibit. Will you now look at the exhibit and see whether in addition to the belt there is a friction driving mechanism for the lower reel, and if so state whether you can recollect that friction drive?

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A. Yes, I do remember the friction device. I also remember the shaft mounted on one side of the camera and run by bevel gears which carried large shutters and these shutters made in two parts so that the aperture could be adjusted for short or long exposures.

Q25. I call your attention to an arm that presses down on the film by spring pressure near the bottom of the camera. Do you remember anything as to this?

A. Yes, I remember that that arm is placed there for the purpose of giving flexibility to the feed of the film.

Q26. When did you leave the Maltby shop?

A. I left the Maltby shop in the latter part of the

summer of 1895, just the exact time I can't remember.

Q27. How many of these cameras had been completed before you left the shop?

A. There was three cameras completed while I was there, and I understood that one of those cameras was going to Paris, the other was going to London and the first one was to remain here.

Q28. Did you ever see any pictures taken by this first camera?

A. Yes, I do. Some time in the spring of '95 I was invited by Mr. Chinnock to come up to his place in East New York on a Sunday morning when he had rigged up to take some pictures of some girls dancing on a roof.

Q29. Tell us as far as you can recollect how this place was fitted up?

A. The place was fitted up with some kind of a little extension built on the roof where the machine was operated and at the other end of the roof behind the performers was a screen fixed of canvas or muslin.

Q30. Was this Sunday the first knowledge that you had that Chinnock had been taking pictures with this camera?

A. No. I had seen pictures that Chinnock brought down to the shop before that time which he claimed were taken by the camera.

Q31. Do you remember what street this place was on in East New York?

A. I am not sure, but I think it was on St. Marks Avenue, or in that neighborhood.

Q32. Did you make any kinetoscopes for Chinnock?

A. Yes, I made first one model kinetoscope and later on we made one lot of eight, if I am not mistaken.

Q33. I show you a photograph and ask you whether you can recognize the same?

Showing witness Defendant's Exhibit,
Photograph Maltby Shop.

A. Yes. I remember Mr. Hollman, standing under No. 2 in red ink. I remember Mr. John Milliken, which is marked No. 3, marked in red ink on his chest. I also see Mr. Maltby standing with his back up against a post. That is No. 1 in red ink. I remember one or two faces, but do not remember their names.

Q34. Do you remember the room showed in this photograph?

A. Yes, I remember the room. I remember this room as being Maltby's shop.

Q35. Before to-day when did you last see or have any communication with Mr. Chinnock?

A. From the time I left Maltby's place I do not remember of having met Mr. Chinnock until one time I met him on the street, in Beekman Street, about in the neighborhood of Nassau Street, that was about nine years ago.

Q36. And that is the last time you saw him until to-day?

A. Until to-day.

Q37. When have you last seen or communicated with Mr. Maltby?

A. I saw Mr. Maltby about a year after I left the shop. At that time he had a bicycle store and a shop at corner of Fulton and Clinton Streets. I bought a bicycle from him and that is the last time I seen him.

Q38. Do you find anything in this Defendant's Exhibit Chinnock Camera which has been altered since you first completed it?

A. No, I do not see any alterations that I can remember.

Q39. Do you remember whether there was any cover for the mechanism when it left the shop?

A. Mr. Chinnock, I believe, had a cabinet made of wood in which he placed the camera, but I can not remember any details of that.

Direct examination closed.

Cross Examination by Mr. Page, subject to objection:

XQ40. Did you ever operate this camera yourself for the taking of photographs?

A. No, I did not, except in some preliminary test to see how the camera spaced the pictures of film.

XQ41. In these preliminary tests did you vary the adjustments of the springs controlling the pressure between the two rolls?

A. No, not that I can remember. The spacing was correct as far as I remember from the first trials. I think I remember that we had to slacken some springs as they showed a tendency to partly tear the film at the first trials.

XQ42. I did not ask you anything about the spacing, why did you tell me about that in your last answer?

A. Well, I only told you or answered the question as I thought it was proper.

XQ43. You have talked over this camera and the facts connected with it with defendant's counsel more or less during the last three or four weeks, have you not?

A. I have only been up in this place once before to-day.

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Charles O. Pearson.

XQ44. That was when you signed your affidavit?

A. That is it.

XQ45. Did you discuss with Mr. Chinnock or defendant's counsel to-day the matter of spacing of the pictures of this camera?

A. No, only that I mentioned that I thought the spacing was $\frac{3}{4}$ of an inch and Mr. Chinnock said he thought it was one inch.

XQ46. I mean the question of the evenness or regularity of the spacing, was that the subject of discussion?

761 A. We did not discuss this point, neither this morning nor the other time I was up here, with the exception that Mr. Chinnock remarked this morning, "do you remember how beautifully the spacing was at the first time"?

XQ47. When you made your preliminary tests with this instrument did you adjust the pressure of the lower rolls so that it would be just efficient to pull the film through the clamp when the latter was released?

A. Yes.

762 XQ48. And you adjusted the upper rolls so that the pressure between them was very much greater?

A. Yes.

XQ49. Did you ever operate this instrument without the spring arm which is now present in it between the lower rolls and the take-up reel?

A. Not that I can remember.

XQ50. Did you make that spring and attach it to the camera?

A. Yes, I believe I did.

XQ51. You do not remember when you did this, do you?

A. No particular time except when the camera was made.

Cross-examination closed.

Re-direct Examination by Mr. Eyre:

RDQ52. You have been asked in cross-examination about conversations you have had with Chinnock and with us. How long before Mr. Page came into the room had you been here this morning?

A. I should say ten minutes.

RDQ53. And that ten minutes was the only communication as I understand you that you have had with Mr. Chinnock since you saw him in the street about nine years ago?

A. Yes.

RDQ54. You made an affidavit on April 28th. When did you first have anybody talk to you about the subject-matter of that affidavit?

A. I think it was the preceding day or the 27th. When the gentleman that you sent was up in my place.

RDQ55. Do you recall how the affidavit that you executed on the following day was prepared?

A. Only that you asked questions and I answered them about the same as I have done to-day.

RDQ56. Do you recollect whether or not the affidavit substantially as it was executed was dictated while you were with me?

A. There was no dictation except that you asked questions and I answered.

RDQ57. Don't you remember that I dictated the affidavit in collaboration with you to my stenographer?

A. Sure.

RDQ58. From that day, April 28th, until this morning have you met and talked with anybody connected with or interested in the case, except for such questions as I have asked you on the telephone?

A. Nobody at all, only that you called me up on

the 'phone yesterday and arranged to meet me here this morning.

RDQ59. You have said that you could not tell the particular time when you put this spring arm on, that is the spring arm bearing against the lower part of the film at the lower part of the camera, except that was when you made the camera. Do you mean by that that it was made during the two months that it took you to make the camera?

Mr. Page: Objected to as leading.

A. I cannot positively remember whether that spring was put on in the first place or after some trials.

RDQ60. You recollect whether or not it was on the machine when it was first taken away from the Maltby shop?

Mr. Page: Same objection.

A. Yes, it was.

RDQ61. Do you remember when in testing the feeding mechanism with paper anything was done to ascertain how accurately the mechanism was feeding, if so, what?

A. Yes, I remember that when we passed the paper through we took a lead pencil or a scriber and drew lines across the paper which we measured up to see how it was registering.

RDQ62. Do you remember whether or not there were any marks made on the paper by the machine itself, if so, what?

A. No other marks except that when we first tried it I remember that the tension on the lower feeding rollers was a little too strong, so that it

had a tendency to tear the paper and we subsequently weakened the spring.

RDQ63. Have you been paid anything for your affidavit or for this testimony, or have you been given any promises of any kind?

A. Not a cent so far. No promises.

Deposition closed.

Signature waived by consent.

HARRY C. LOHMAN, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Harry C. Lohman; 362 Weirfield Street, Brooklyn; 39; machinist.

Q2. You say you are a machinist, are you employed by some one or operating your own shop?

A. Operating my own shop.

Q3. When did you first see a moving picture camera? 771

A. At the Maltby Mfg. Company's shop.

Q4. What connection did you then have with the Maltby Mfg. Co.'s shop?

A. I was employed there as a tool maker and also a draftsman.

Q5. Where was the shop located?

A. 18 Columbia Heights, Brooklyn.

Q6. When did you enter the employ of the Maltby shop?

A. About the latter part of July or the fore part of August, 1894.

Q7. What condition was this moving picture camera when you first saw it there?

A. They were just starting to build it.

Q8. How long after you went to work there did they begin this work on the camera?

A. About a month and a half or two months, I should judge.

Q9. Who was the camera being made for, do you know?

A. A Mr. Chinnock, a Mr. Charles Chinnock.

Q10. Who, if you recollect, was doing the work on the camera?

A. Charles Pearson.

Q11. Do you recollect anything as to how it came that Pearson was put on the job?

A. He was hired for that purpose.

Q12. How steadily was the work of building this camera carried on?

A. They stayed to work on the camera until it was completed.

Q13. During that time how much was Mr. Chinnock in the shop?

A. He was there all the time.

Q14. What is your recollection as to how long was taken in the building of this camera?

A. About a month and a half or two months.

Q15. What do you recollect as to any testing of the camera in the shop?

A. They made tests there with rolls of paper, to test out the mechanism as I remember.

Q16. Where were you working before you went to the Maltby shop?

A. William A. Force & Company.

Q17. How long a time was there between your employment with Force and your employment with Maltby?

A. Not more than a day.

Q18. What was the nature of your work with the Force Co.?

A. Tool maker.

Q19. Do you remember what was done with this Chinnoch camera after it was completed and tested?

A. It was taken to East New York to a man named John A. Milliken.

Q20. Who was he?

A. He did machine work of his with the Maltby Co. He hired shop room there.

Q21. Do you remember any other work done for Chinnoch at the Maltby shop?

A. Only the kinetoscopes built afterwards, and I believe they made two other machines, two other cameras, I do not remember how many kinetoscopes they made, I think it was 3 or 6.

Q22. Did you work on any of these cameras or kinetoscopes yourself?

A. I do not remember whether I made any of the parts of the camera, but I did make some of the parts of kinetoscopes.

Q23. Please look at the apparatus on the desk here (Defendant's Exhibit, Chinnoch Camera), and state whether or not you recognize it?

A. Yes. I recognize the machine.

Q24. What is it?

A. A camera for making pictures, making a series of pictures, a number of pictures per minute.

Q25. Have you seen this camera before? If so, state when you saw it.

A. Yes. I saw it in the course of construction and after it was completed at the Maltby shop.

Mr. Page: The testimony of this witness directed to showing the time of construc-

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tion and other facts connected with the defendant's exhibit Chinnock Camera, is objected to as irrelevant and immaterial, and such objection will be continued to further testimony for the like purpose without repeating the objection on the record.

Q26. How did the different cameras made for Chinnock at the Maltby shop compare with each other, so far as you can recall?

A. They were all about the same.

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Q27. Is the Defendant's Exhibit Chinnock Camera that you see before you complete with all the parts that you remember to have seen in the original camera?

A. No, there was a cover of some kind and there was a wheel in front of the lens.

Q28. Please examine the photograph I now show you and state whether you can recognize the same, and if so, what place it shows and what people there are in it that you can identify?

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A. Frank D. Maltby is marked 1 in red ink. Henry Hollman 2, John A. Milliken 3, Jack Miller 4, and John Thomson 5, and Walter Blackburn 6, and Herbert Barnes 7, and Howard Edge 8. The figures 4 to 8 I have myself added.

The Witness was shown Defendant's Exhibit Photograph Maltby's Shop.

Q29. Do you recall anything as to the taking of this photograph?

A. I was there, but I am not in the picture.

Q30. How is it that you are not in the picture?

A. I was hiding.

Q31. When was this picture taken?

A. In 1894. I can't tell just exactly the month.

Q32. Do you know how it is that Pearson is not shown in the picture?

A. Pearson was not there at that time.

Q33. You mean that he had not yet entered the employ of Maltby?

A. That is right.

Q34. Did you ever see any of the pictures taken with Chinnock's first camera?

A. I saw a film, a picture of a dancing girl. He promised me other pictures, but I never got them.

Q35. Do you remember when you first saw pictures taken on this machine?

A. I couldn't tell the time.

Q36. When did you first hear anything about the fact that the facts and dates of the Chinnock camera were being looked up?

A. Last Saturday, about four o'clock.

Q37. Since then, have you talked with anybody familiar with the matter except the representative sent from this office and myself?

A. No.

Q38. How long is it since you have talked to Chinnock or anyone connected with him, or anyone connected with the Maltby shop about the Chinnock camera?

A. Not in the last ten or twelve years.

Direct examination closed.

Cross Examination by Mr. Page, subject to objection:

XQ39. Did you examine the Chinnock camera when it was in the Maltby shop with sufficient care to enable you now to identify the specific parts of

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Harry C. Lohman.

this apparatus on the table as being present in the camera at that time?

A. I do not quite understand the question. I examined the camera sufficient enough not to know its detailed parts, but to know that it is one of the cameras that was built at that time. Particularly the side plates I remember.

XQ40. This camera has a large pulley wheel mounted on one of the shafts. Was that on the camera when you saw it?

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A. I don't think so.

XQ41. This instrument also has two small rolls pressed together by a spring at the upper part of the frame through which the film passes. Were those two rolls in the camera when you saw it in the Maltby shop?

A. That I can't recall.

XQ42. This instrument also has a bar carried by two arms which are held by spring pressure against the film between the take-up reel and the lower feed rollers. Was that device in the camera when you saw it in the Maltby shop?

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A. Yes, that was on it.

XQ43. When did you first see that device on the camera?

A. This device was the suggestion of a Mr. Holloman to Mr. Chinnock, I believe.

XQ44. That was put on some time after the camera was built, wasn't it?

A. It was one of the last things put on.

XQ45. This instrument on the table has a pair of feed rolls held together by spring pressure and of somewhat larger diameter than the upper feed rolls. Was this pair of larger feed rolls on the camera when you saw it in the Maltby shop?

A. The whole machine looks just about the same as it did then with the exception of a covering and wheel on the front of the machine, with the exception of the side wheel.

XQ46. Is it not a fact that the most you can say about this camera is that its general appearance is so similar to the camera which you saw in the Maltby shop that it is your present belief that this is the camera which was made by Pearson in the shops some time in the latter part of 1894?

A. It is.

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Cross-examination closed.

Re-direct Examination:

RDQ47. Who was Mr. Hollman?

A. Mr. Hollman was a member of the firm of the Maltby Mfg. Co.

RDQ48. You say that this spring arm device at the lower part of the camera was, you believe, a suggestion of Mr. Hollman to Mr. Chinnock?

A. Mr. Hollman claims to have suggested that to him. I have always believed it that way.

RDQ49. That is, Mr. Hollman made the claim at the time you and he were in the shop together?

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A. Yes. He blew about it as the fellows say.

Deposition closed.

Signature waived by consent.

ROBERT T. MOORE, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Robert T. Moore, 36 years old, lineman by occupation, Medina, N. Y.

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Robert T. Moore.

Q2. Have you ever seen a machine for taking photographs of moving objects?

A. Only the one I saw the day I was out there with James Lahey boxing.

Q3. Whose camera was that?

A. Mr. Chinnock's.

Q4. And where was it?

A. It was out in East New York where we went, out near Manhattan Crossing.

Q5. Why were you and James Lahey boxing that day?

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A. Out in the open.

Q6. And why were you boxing?

A. In front of this machine, experimenting with it, I suppose.

Q7. Who was operating the machine while you and Lahey were boxing?

A. Mr. Chinnock.

Q8. That is Charles E. Chinnock?

A. Yes.

Q9. Who asked you to go there?

A. Mr. Chinnock.

Q10. Where were you working at that time?

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A. At Zipp's Casino, Elm Place, Brooklyn, next to the Grand Opera House.

Q11. Did you ever see the pictures afterwards that were taken on that day?

A. I saw them after he had developed them.

Q12. What did they look like, these pictures?

A. They looked like a photograph, only they were moving when he had them in the box of some kind.

Q13. Did you see them before they were put in the box and after they were developed?

A. I seen him develop some of them.

Q14. What did they look like?

A. They look like long strips. He had them in a pan, a pan of liquid.

Q15. Where did you see them developed?

A. In his house, 157 Sixth Avenue, Brooklyn, top floor.

Q16. When was it that these pictures of you and Lahey boxing were taken?

A. About the middle of November in 1894.

Q17. How do you fix this date?

A. I remember because I was working in the Casino that winter.

Q18. When did you stop working in the Casino?

A. I should judge it was between Christmas and New Years, '94, when I went away.

Q19. Where did you go when you left the Casino?

A. I went to Buffalo first.

Q20. How long did you stay away from Brooklyn?

A. Nine years that time.

Q21. How positively do you recollect that you left the Casino before New Year's, '95?

A. I know that I went away, to Buffalo that winter.

Q22. While you were still at Zipp's Casino, did you do anything to assist Mr. Chinnock's work in this line?

A. I tried to get the Clafflin Sisters for him at one time. I never did any work for him.

Q23. Were the Clafflin Sisters at the Casino at that time?

A. They used to dance there regularly, not what you would call steady, they danced there three or four times a season.

Q24. And do you mean that you tried to get them to dance before Mr. Chinnock's camera for him?

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Herbert C. Barnes.

A. I told him I could get them. A man that was advertising agent there said that he could get them for him.

Q25. What do you remember about the appearance of the camera with which Chinnock took pictures of yourself and Lahey?

A. That machine there looks like the machine. It seems to me there was a big disk or something in front of it that kept going around. (Witness points to Defendant's Exhibit, Chinnock Camera.)

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Mr. Page: Deposition objected to as irrelevant and immaterial.

Cross examination waived.

Adjourned to May 12th, 1911, at 11 A. M.

Signature waived by consent.

New York, N. Y., May 12th, 1911, 11 A. M.

Met pursuant to adjournment.

798 Present: Counsel as before.

HERBERT C. BARNES, a witness called on behalf of the defendant, being first duly sworn, deposes and says in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Herbert C. Barnes; 33; Ardmore, Pennsylvania; head tool designer of the Standard Roller Bearing Co., of Philadelphia.

Q2. Have you ever been acquainted with one Frank D. Maltby?

A. Yes, sir.

Q3. You worked for him?

A. I did.

Q4. When was that?

A. From the summer of 1893 until some time in the summer of 1895.

Q5. Will you please state how you fix these dates in your mind?

A. I know that I began in 1893 because I left the Brooklyn Polytechnic Institute in June of that year, and I continued in the employ of Mr. Maltby a little more than two years.

Q6. How immediately after leaving the school did you go into this shop?

A. On the following Monday.

Q7. What generally was the character of your work with Maltby?

A. Such work as would ordinarily be assigned to a youth in a small machine shop, doing simple operations on the machine, and errand work.

Q8. While you were at that shop did you see anything done in the way of moving-picture apparatus?

A. I did.

Q9. What was the first work that you recall seeing done in that line?

A. Mr. Maltby gave me a brass casting which he instructed me to plane on both sides. I did this work according to his instructions.

Q10. What was this casting for?

A. It was for a side frame for a camera for one Mr. Chinnock.

Q11. Do you recall who else was working on that camera?

A. I remember that soon after this one Charles Pearson did a considerable amount of work on the camera.

Q12. How closely can you fix the date when you did this planing work on the casting?

A. It was some time in the latter part of the summer or fall of 1894.

Q13. Did you see this camera completed?

A. I saw it so far completed that pictures were taken with it.

Q14. Do you mean that you saw the pictures being taken?

A. No. I saw pictures which I was told were taken with the camera and which I have every reason to believe were taken with the camera.

803 Q15. At the time you saw these pictures was the camera in the Maltby shop or had it been taken away?

A. It had been taken away.

Q16. Will you please state as near as you can when you saw these pictures?

A. It was before cold weather of the winter of 1894.

Q17. Will you please describe what you remember of the appearance of the pictures and the paper or film on which they were?

A. They were on a film of paper in a single roll on a strip possibly twelve inches or more long.

804 Q18. The figure in the picture was that of a dancing girl or woman.

Q19. Did you ever see any of the pictures exhibited in any way, if so, how?

A. I am unable to state positively that the pictures which I saw in a kinetoscope were actually taken with the Chinnock camera.

Q20. Whose kinetoscope was it that you saw pictures in?

A. My recollection of the kinetoscope is one which I saw at the Eden Musee in New York.

Q21. Will you please look at the apparatus on the desk (Defendant's Exhibit Chinnock Camera)

and state whether there is anything about this that you can identify, and if so, what it is?

A. I remember very clearly the shape of the two side frames and the general position of the paper on the roll. I remember this front spacing member at the top which connects the two frames. I am quite certain that I remember these two bevel gears which were obtained by Mr. Maltby in New York, and submitted to Mr. Chinnock for his approval. I remember seeing the mechanics at work on the machine in their efforts to protect the action of the rolls in controlling the movement of the paper. I remember that for a time the paper prior to the perfection of the mechanism was under limited control until a device was appended to give it a more regular motion. This refers to the action of the paper after the photographic action had taken place.

Q21. When you speak of the photographic action taking place, do you mean that any photographic action had actually taken place in the Maltby shop, or are you simply referring to the point where it was expected to take place?

A. I referred to the continued action of the machine in its performance of its several functions, the photographic action meaning the operation of those parts which produce the impression on the film. This part of the operation occurred during the passage of the film from the roll on which it was placed in the machine to the roll on which it was wound before it was taken from the machine.

Q22. Did you ever see the machine until to-day after the time that it was taken away from the Maltby shop before the cold weather of '94 and '95?

A. No.

Q23. Do you remember any part or parts on the original machine that are not now on the exhibit?

A. I remember two disks of thin steel or other thin metal which were adjusted in some fashion to regulate the amount of light which reached the lens while the instrument was in use.

Q24. Was the lens on the machine when it was at the shop, do you remember?

A. I do not clearly remember having seen the lens on the machine.

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Q25. Do you remember any other work being done for Chinnock in relation to this art besides this particular camera?

A. I remember that the Maltby Mfg. Co. made for Mr. Chinnock several machines to exhibit the moving pictures which were taken with the camera, these machines I believe Mr. Chinnock called kinetoscopes.

Q26. Do you remember whether or not there were any other cameras like this made?

A. I believe that there were, I cannot state definitely how many.

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Q27. You have referred to planing a casting for this work; is the casting in question on the exhibit?

A. This smaller of the two side frames is entirely similar to the one which I planed.

Q27½. How much was Mr. Chinnock around the shop when making the first camera?

A. He spent much of his time there, as I remember.

Q28. I hand you a photograph, Defendant's Exhibit Photograph Maltby's Shop, and ask you what you can recognize as to the shop therein shown, and also to identify any of the persons shown therein by number, if you can do so?

A. The photograph which you handed me is a photograph of the machine shop of the Maltby Mfg. Co., 18 Columbia Heights, Brooklyn, as it was at that time. I identify positively Fig. No. 1 as Frank Maltby, No. 2 as William A. Hollman, No. 3 as John Milliken, No. 4 as Jack Miller. I am unable to give the name of No. 5. No. 6 commonly known as Walter Blackburn, although I believe his name to have been something like Walter Blackbrough. No. 7 as myself, No. 8 as Howard Edge. The man whom I now mark in red ink, No. 9, as Clarence Graves, and the man whom I now mark with red ink No. 10 as Curtis Adams.

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Q29. Do you remember the names of any other men that worked in that shop during any part of the period from the summer of '94 to the summer of '95, and if so, please state their names?

A. I remember Charles Pearson, who for a part of that time was the foreman of the machine shop, and Harry Lohman, who was a skilled mechanic.

Q30. How about a man by the name of William Edge? Do you remember him?

A. I do.

Q31. Was he working there at that time?

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A. He was.

Q32. Do you remember any one by the name of Thompson?

A. George Thompson, I do.

Q33. Would you say that No. 5 might be George Thompson?

A. I do not recognize No. 5 as being Thompson.

Q34. When did you first hear that this Chinook camera was a matter of interest in any litigation or controversy?

A. At some time within the last ten days.

Q35. You heard of this through a representative

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Herbert C. Barnes.

of our office who called on you at Philadelphia at your place of business, is that correct?

A. That is correct.

Q36. Outside of his interview with you and your interview with me this morning, whom have you communicated with who is in any way interested in the controversy or who was in any way connected with your work?

A. I have communicated with no one.

815

Direct examination closed.

Mr. Page: The entire deposition is objected to as irrelevant and immaterial to any of the issues in controversy in this suit.

Cross Examination subject to objection:

XQ37. You have said that you have reason to believe that the pictures that you saw of the dancing girl were taken on the camera for which you planed the side plate. What were your reasons for this belief?

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A. The fact that the pictures were brought into the machine shop by persons interested in the camera at a time when it would have been entirely possible for them to have been taken with the camera, the fact that I was told that they were taken with the camera and the further fact that all the persons who were engaged in making the camera displayed a keen interest in the pictures and that all apparently believed that the pictures had been taken with the Chinnock camera.

Mr. Page: In view of the witness's answer his testimony with regard to the taking the pictures by the Chinnock camera is ob-

jected to as hearsay in addition to the objections heretofore made.

Mr. Eyre: Counsel for complainant evidently understands the purpose of the testimony, which is taken to show date of completion of the camera which the witness recalls was a time prior to the date when he saw the pictures.

Mr. Page: Notwithstanding the remarks of counsel for defendant the objection is adhered to.

XQ38. At what date in the year 1894 did cold weather begin?

A. I do not know.

Cross examination closed.

Deposition closed.

Signature waived by consent.

WILLIAM EDGE, a witness called on behalf of defendant, being first duly sworn, deposes and says in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. William Edge, 49; occupation at the present time manufacturing machinery; 34 North 11th Street, Newark, N. J.

Q2. You are proprietor of your own shop?

A. Yes.

Q3. Were you ever employed with the Maltby Mfg. Co., if so, when?

A. I was. From some time in '93 to '97.

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Q4. While you were working with the Maltby Mfg. Co. was any work being done in that shop relating to moving pictures apparatus that you can recall?

A. There was.

Q5. Who was that work being done for?

A. Mr. Chinnock.

Q6. Who was doing the actual work on the camera, as far as you can remember?

A. I can remember Mr. Pearson, Mr. Korbel and Herbert Barnes.

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Q7. Who was doing most of that work?

A. I think that Pearson practically had charge of it.

Q8. Can you fix the time when this work was done?

A. It was some time in '94, I don't know just what part of the year now.

Q9. Do you remember who were the proprietors of the shop at the time this work was done?

A. I think Mr. Maltby and Mr. Hollman were partners at that time.

822

Q10. Was Pearson employed there when you first went to work with the Maltby shop?

A. No; nearly a year later before Pearson came there.

Q11. Do you remember what the first work was that Mr. Pearson did when he came to the shop?

A. His first work was on the picture machine.

Q12. That is, this work for Chinnock?

A. Yes.

Q13. How continuously did Pearson work on this machine?

A. He was on it, I think, all the time until it was finished.

Q14. How much was Mr. Chinnock there while this work was going on?

A. He was there every day.

Q15. How long did they take to complete the machine?

A. It must have been close on to two months.

Q16. Please examine the apparatus, Defendant's Exhibit Chinnock Camera, on the table before you and state what, if anything, you can say as to what this apparatus is?

A. Why, I recognize the shaft on which the shutter was screwed and I remember distinctly the movement of the paper there and the breaking of the paper during the first experiments.

Q17. How does the general appearance of this apparatus compare with your recollection of the appearance of the first Chinnock camera?

A. Exactly my recollection of it.

Q18. You have spoken of some tests with paper. Did you see these tests made?

A. Yes, I stood behind them and watched them running the paper and noticed that they had considerable difficulty with the breaking of the paper. As I remember it, they tried first with rolls of paper before they tried it with the film.

Q19. You have spoken of recognizing the shaft on which the shutter was screwed. What, if anything, do you recall as to the shutter that was on that shaft?

A. I only recall that it was a tin shutter about 12 or 14 inches in diameter.

Q20. What is it that you remember about the movement of the paper?

A. I remember the loop more distinctly than anything else. The loop formed up there just before the movement that stopped the pictures.

Q21. That is, you mean between this upper reel and the clamp?

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William Edge.

A. Yes.

Q22. Just what do you mean by saying the movement that stopped the pictures?

A. The device that stopped the film the pictures being taken.

Q23. Do you remember whether there was any other moving picture work done for Chinnock besides this?

A. Yes, there were two other machines finished after this.

827

Q24. Were there any machines made for showing pictures?

A. Yes, there were a number of kinetoscopes made; I don't recall just how many, 20 or 25, something like that.

Q25. Was the work on the other cameras and on the kinetoscope begun before or after the first camera was completed and taken from the shop?

A. After.

828

Q26. Will you please examine the photograph I now hand you, Defendant's Exhibit, Photograph Maltby's Shop, and state whether you can recognize the room shown therein and also identify by number any of the persons shown therein that you can recognize?

A. I recognize the room. This was the shop of Maltby and Hollman at that time. I recognize No. 2, 3 and 4, 5, 6, 7 and No. 1, No. 9, No. 8.

Q27. Please state who these persons are, beginning with No. 1.

A. No. 1, Mr. Maltby; No. 2 is Mr. Hollman; No. 3 is Mr. Milliken; No. 4, Mr. Miller; No. 5 is Mr. Thompson; No. 6 is Mr. Blackburn, No. 7 is Herbert Barnes, No. 8 is Howard Edge and No. 9 I don't remember his name. No. 10 I can't place.

Q28. Do you remember a thing about taking this photograph?

A. No, I don't remember.

Q29. Do you know, however, whether you were working with Maltby at the time this was taken?

A. Yes, I was there at that time.

Q30. Where was the Maltby shop at the time that this Chinnock camera was made?

A. It was on the corner of Furman St. and Columbia Heights, Brooklyn.

Q31. After that did Maltby move his shop, and if so, about when and to what place? 830

A. He moved to 17 Vandewater Street, New York. I think it was late in '95.

Q32. What is your recollection as to the length of time before the shop was moved that this first Chinnock camera was completed?

A. It was just about a year, I think.

Q33. Have you talked to anybody familiar with the Chinnock camera except myself and a representative that we sent you recently?

A. No.

Direct examination closed.

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Mr. Page: The deposition is objected to as being irrelevant and immaterial to any of the issues of this case and as purely cumulative testimony in regard to irrelevant and immaterial matters.

Mr. Eyre: The suggestion that the testimony is cumulative in its character is substantially correct. The burden of proof is upon the defendant, and such depositions as the present will not be continued after complainant's counsel is willing to admit, if he should become willing to make such an

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admission, that the Chinnock camera, as already testified to by the witnesses, was completed and taking pictures not later than the end of 1894. Otherwise it is the intention to take sufficient testimony to make this in 'ubitably proven.

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Mr. Page: I think that defendant's counsel is, or should be, best advised as to how to conduct his case. I do not see, however, that if he pursues an objectionable course in doing so that this places complainant's counsel under any obligation to admit any facts which defendant's counsel desires to prove.

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Mr. Eyre: I do not mean to suggest any obligation on the part of complainant's counsel to make any admissions whatsoever, but on matters occurring 17 years ago, cumulative evidence is reasonable and it is reasonable to suppose that when the objection is made that evidence is cumulative it implies that proofs have been sufficient to establish the fact and therefore that an admission would simply save time and expense to both sides.

Cross Examination, subject to objection:

XQ34. Do you remember when the first tests were made with this machine with the paper strip that it was difficult to prevent the paper from breaking?

A. I do.

Cross-examination closed.

Deposition closed.

Signature waived by consent.

Adjourned to May 15, 1911, at 11 A. M.

New York, N. Y., May 15th, 1911, 11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

JAMES W. LAHEY, a witness called on behalf of the defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation? 836

A. James W. Lahey; 52; 790 President Street, Brooklyn; I am connected with the Federation of Churches as the expert census taker.

Q2. You know Charles E. Chinnock?

A. Yes, sir.

Q3. Were you ever connected with him in a moving picture business?

A. Yes, sir.

Q4. What was your first connection with him in that business?

A. In taking photographs of a boxing match. 837

Q5. What did you have to do with that?

A. I was one of the boxers.

Q6. Who was the other?

A. Mr. Moore, Charles T. Moore, I believe.

Q7. Where was it that these pictures were taken?

A. In East New York. It was Crescent St. Station, Kings Co. elevated road, and then we walked several blocks, I don't know what street it was. It was in an old unoccupied house that we had rented for that purpose, of testing the machine.

Q8. Who took the pictures of you and Moore boxing?

A. Mr. Charles E. Chinnock.

Q9. Where were you and Moore and where was Chinnock and the camera?

A. Mr. Chinnock was inside of the house, inside of the window, and Moore and I were out in the open about 10 feet or so from the camera.

Q10. When did this occur?

A. That was in the fall of '94.

Q11. Where had you been in the summer of 1894?

A. In Convent, N. J.

Q12. When did you return from Convent?

A. About the 1st of October.

Q13. How long after that was it that the boxing bout was photographed?

A. Probably a month or six weeks after it. It might have been the latter part of November or in December.

Q14. Did you spend any other summers at Convent?

A. No, sir.

Q15. What do you know about the developing of the pictures of the boxing bout?

A. I was with Mr. Chinnock when they were developed. They were developed at his residence at 167 Sixth Ave.; we had a rear room on the top floor, and from that rear room there were two small rooms or a passage; they had a sink in each one and a closet in the back, a wardrobe.

Q16. What, if anything, did he do with the film before developing it?

A. It was cut in strips.

Q17. Will you please explain that a little more clearly?

A. The film was in a continuous length and before we developed it we cut it in strips, say about 12 or 13 inches long, in order to develop it in the

pans that we had. As we cut it each one was numbered with a sharp instrument so that we would know just where it belonged.

Q18. Did he cut the film crosswise and lengthwise or only crosswise?

A. It was crosswise.

Q19. About how wide was the film?

A. About probably an inch and a half, it might be only an inch and a quarter.

Q20. What sort of results were obtained?

A. They were good pictures.

Q21. How soon did you see those pictures?

A. I saw them right after they were developed, before we left the room. I held them up to the light.

Q22. And how soon was this after the pictures were taken?

A. The very same day, the very same night. They were developed that evening.

Q23. Do you remember anything about Mr. Chinnock's showing the pictures to others?

A. After we printed them, yes. We showed them to numerous people. Every one that had been to his house. And we had the pictures at the Christmas gathering he had at the house that year. And every one saw the pictures and commented on the different pictures of Mr. Moore and myself.

Q24. That is, the Christmas holidays of '94, you are referring to?

A. The Christmas of '94, yes.

Q25. What was done with the camera afterwards, if you recall?

A. After we used it at this house it was taken either to Mr. Chinnock's house, or down to the Maltby shop. I think it was taken to Mr. Chinnock's house. We only hired that house just to

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James W. Lahey.

try it there. We had no idea of using it continually.

But I don't remember taking that machine to Mr. Chinnock's house from that shanty. It might have been taken by somebody else, but I don't remember taking it myself.

Q26. Did you ever see the same camera after it was taking pictures?

A. Yes.

Q27. Where was that?

845 A. In the St. Marks Avenue shop that we hired there near Rockaway Avenue, in the rear of a little house. I have forgotten the number.

Q28. Do you remember when you hired this house?

A. I don't recollect the exact date. I don't know whether it was in January, I think possibly it was in January; it might have been in the latter part of December. I can't recollect positively.

Q29. That is January, 1895, or the latter part of December, '94?

A. Yes, sir.

846 Q30. How was this St. Marks Avenue place fitted up?

A. There was a skylight in the roof. It was only a one-story building. We had a carpenter remove the skylight and build a pair of stairs from the floor of the shop to the roof, and had the skylight arranged so that it could run on rollers so that we could just push it over. And then we had a fence built around the roof to afford us privacy in taking pictures, and a platform for the subject which we wanted to take, and right across from the platform we had a small house built. It was light-proof and we put the machine in there. We put the film on there and after the pictures were taken, took it off

and we moved it downstairs to a dark room which we had built in one corner of the shop with several porcelain sinks for the different solutions, baths and running water, and so on. And there is where we developed the pictures.

Q31. How soon after you rented this St. Marks Avenue studio did you begin taking pictures there?

A. We began right away, as soon as we had it fitted up. There were plumbers there and we had the dark room built and the platform and the back-ground on the roof and we had to have a cover for the back-ground, a large piece of cloth that was sewed together, and hooks to hang it up.

Q32. About how long was it that it took to fit this up?

A. Probably two weeks.

Q33. Do you remember anything as to the first large quantity of film that Chinnock obtained?

A. I don't remember the date. But he told me that he had ordered immediately after the trial some film, a lot of it.

Q34. Do you remember whether the first lot of film, that is, substantial quantity, was received before or after you got into the St. Marks Avenue place?

A. I think it was received after we got into the St. Marks Avenue place, but it was received before we were ready to take the pictures.

Q35. How soon after you received that quantity of film did you begin taking pictures with it?

A. Just as soon as the things were in readiness on the roof. I couldn't tell just exactly how long.

Q36. Did you ever see the pictures of your boxing bout with Moore shown in a machine to show life in motion?

A. Yes, sir.

Q37. What sort of a machine was that?

A. We called it a kinetoscope.

Q38. When did you first see these pictures in a kinetoscope?

A. Early in '95. As soon as we had the machine built. I saw the picture on a crude machine that we built ourselves at Mr. Chinnock's house, that is, a drum, we were experimenting for a long time to get the size of a drum that was best to use to put the pictures on.

851 Q39. Did you see these pictures on a crude machine before or after you went to the St. Marks Avenue studio?

A. Before; long before.

Q40. When did you first have a completed kinetoscope at the St. Marks Avenue shop?

A. We had a completed kinetoscope some time before we put them on exhibition outside of the shop. We had one machine complete in the shop some time before they were put on exhibition, as there was delay in waiting for cases for the machines, and of course we did not care to put the machines on exhibition until we had them covered.

852 Q41. When did you get these kinetoscopes out on exhibition?

A. In '95, in the summer of '95. We had some at Carnarsie, and we had one at Val Smith's hotel in Brooklyn. The first was at Carnarsie. Carnarsie Park they called it then.

Q42. What subjects do you recall as being photographed at St. Marks Avenue before you put out any of these kinetoscopes on exhibition?

A. There were the Clafflin Sisters. We took them in two or three different dances, single and double, and there was a boxing bout of McDermot and somebody else, I can't recall his name. There was

a dancer there, May Jewell, and there was Ruth St. Dennis, and shortly after opening at Carnarsie we had the coochee coochee dance. I don't remember the names of the performers.

Q43. How much time did it take after you had taken the subject and developed it before you could get the positives properly fixed in the kinetoscope?

A. They had to be printed, after developing, and then mounted on this strip of prepared paper that we had. I presume that it would take two days, if we had the right kind of weather.

Q44. What do you remember about the construction and operation of the camera that took the various pictures you have referred to?

A. I was only occasionally in Maltby's shop, but I remember seeing Mr. Chinnock have the drawings of it at home and every day he was down at Maltby's shop for a long while, but I had no business that took me down there, and therefore very seldom visited there.

Q45. What I meant to ask was what do you recall about the mechanical parts of the camera and its appearance and the way it fed the film?

A. As I recollect it, it of course had the film running through the different rollers, and after each picture was taken there would be a slack or a buckle or loose part of the film there. It would not be drawn tight. After each picture the film was loose. And I recollect asking Mr. Chinnock why that was, and he said to be ready for the next picture.

Q46. When Mr. Chinnock was taking pictures with this camera what, if anything, did he do while the pictures were being taken?

A. He turned the crank that worked the film.

Q47. Please examine the mechanism on the desk before you, Defendant's Exhibit Chinnock Camera,

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and state what you can say as to whether or not you have seen this before.

A. Yes, I have seen it before, dozens of times.

Q48. What is it?

A. A picture machine, a machine for taking pictures.

Q49. And where have you seen it before?

A. I seen it in that house where we took the first pictures, I seen it in Mr. Chinnock's house, I seen it in Maltby's shop, I seen it in St. Marks Avenue shop.

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Q50. In other words you recognize it as the camera about which you are now testifying?

A. Yes, sir. I seen it also in Mr. Chinnock's cellar.

Q51. When was that?

A. I saw it there after Mr. Chinnock went out of the business.

I had occasion to go down there to look for a trunk that I was going to get for my sister, to borrow for her.

Q52. How long ago is that?

A. About two years ago.

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Q53. When did Mr. Chinnock go out of business?

A. I can't remember exactly. About 10 years ago. I wouldn't be positive about that. I was with him nearly all the time; it is more than 10 years.

Q54. Think it over and see if you can place when you left there?

A. About 15 years ago.

Q55. About 1896?

A. Yes.

Q56. At the time you took part in the boxing bout with Moore, do you remember any policeman present?

A. After we had taken the picture, I remember a

policeman coming in and asking—he wanted to see what we were doing there, and in speaking to some neighbor, some woman, she said that he thought that we were coiners. I asked her what they meant by the word coiner, and she said counterfeiter, so I presume he came in to investigate; that was what brought him in there.

Q57. I hand you a small book and ask you whether or not you are able to identify it.

A. This is a receipt book that I used in making the collections from the different stores where we had machines, kinetoscopes, placed. That was worked on a commission basis, and I, making the collection, would make out the receipt. Here is one here: Val Schmidt, \$3.70, is the commission on \$12.25; we gave him 30%, the total amount of the machine. I would get some of the parties in the store to sign the receipt. All these are receipts that I can state in my writing except the signatures. Of course this is only one book that Mr. Chinnoch happened to save out of the collections that I used to make. These are all in my writing, except the signatures, of course.

The book shown the witness is Defendant's Exhibit North American Kinetoscope Company Receipt Book.

Q58. At what dates did you fill out these receipts?

A. The first one November 25th, 1895. December 2nd. They were all filled out at the dates shown on the receipts.

Q59. Was this the first receipt book that you used in this work?

A. I don't think so. That was only one of many. I would have a new book every time that I collected

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James W. Lahey.

from the machine and would turn in the receipts with the book. Take a new book every time I went around.

Q60. How long was it before Mr. Chinnock used any other camera than this particular one in his business?

A. It was a long while. He built three more machines. It was a good time while the other three machines were being built.

Q61. Do you remember what these other machines were being built for?

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A. Yes. He disposed of two of them, I believe, to be shipped abroad.

Q62. I hand you a paper, Defendant's Exhibit, Agreement between Chinnock and Hough and Werner, and ask you whether or not it is your signature attached thereto as a witness?

A. Yes, sir; it is.

Q63. Do you know Frank R. Chinnock?

A. Yes, sir.

Q64. Do you remember whether he had anything to do with the kinetoscope business that you have been referring to?

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A. Yes, sir.

Q65. When did he begin to have anything to do with it?

A. I don't remember it. It was not until after the business was fairly started.

Q66. Do you know where any pictures taken with this original Chinnock camera can be found?

A. I do not. I tried to locate some and found out that after we had left the shop or studio that the old place was cleaned out and made a bonfire of everything that was left there by the neighbors that lived in front of it. I found that out recently. Of course, there were thousands of pieces of film

there that we left after us and never expected to use again; I mean of the used pictures.

Direct examination closed.

Mr. Page: Deposition objected to as irrelevant and immaterial with respect to any question involved in this cause.

Cross-examination waived.

Signature waived by consent.

It is stipulated and agreed between counsel that Charles W. Congdon, if called as a witness herein would testify that in the spring of 1895 he bought the interest of William A. Hollman in the business of the Maltby Mfg. Co., a machine shop located at 18 Columbia Heights, Brooklyn, N. Y.; that some time thereafter the company was incorporated to continue the business and that still later the business was abandoned; that for many years he retained possession of all the books and records of the Maltby Mfg. Co., including the books and record relating to the years 1894 and 1895; that he recently at the request of a representative of Messrs. Kenyon & Kenyon made a careful search of the old books and papers, but could not find any old book or records relating to the business of the Maltby Mfg. Co.; that about a year or so ago he was overhauling his old books and papers and destroyed such of them as he deemed of no value, and that he believed that all the Maltby Mfg. Co.'s books and papers were destroyed at that time.

It is agreed that the foregoing stipulation may have the same force and effect as if the said Congdon had been duly called, sworn

and examined on behalf of the defendant herein.

Mr. Page: The testimony is objected to as irrelevant and immaterial.

WILLIAM A. HOLLMAN, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

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Q1. What is your name, age, residence and occupation?

A. William A. Hollman; 67 last October; 65 Lafayette Street, Brooklyn, N. Y.; electrical machinist, New York Navy Yard.

Q2. Were you ever in business with one Frank D. Maltby?

A. I was from the fore part of June, '93, until the latter part of March, 1895.

Q3. Have you anything that aids your recollection as to the time when you were no longer in business with him?

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A. It was the last part of March, 1895, or the fore part of April, 1895. Yes. I have got a bank book here that shows the deposit I made within a day or two of the separation of our partnership, liquidation, I might call it.

Q4. Whom did you receive the money from for the deposit in question?

A. Whether it was Mr. Congdon, my successor, or a broker, either one of the two I received the check for my interest in my business.

Q5. That is you were bought out by Mr. Congdon and received a check from him or his agent?

A. That is it. I did.

Q6. Will you read from your deposit-book what this entry is that you refer to?

A. January, 1894, a balance of \$59.76; Feb. 29, '94, \$36; deposit March 14th, 1894, \$18; May 17, 1894, \$36; June 30, 1894, \$30; Sept. 6th, same year, \$30 Dec. 4, 1894, \$25; Feb. 12th, that must have been '95, \$20; balance left Feb. 13th, 1895, \$43.70; March 30th of '95, \$416.25; May 15th, 1895, \$46; Oct. 30th, '95, balance, \$54.63; Nov. 6th, the same year, \$24; Dec. 12, 1895, \$40; Dec. 18, 1895, \$45; Jan., '96, \$50; Feb. 13, '96, \$69; April 17, \$10. I won't read any further.

Q7. Which of these entries that you have read is the one that relates to your sale to Congdon?

A. March 30th, 1895, \$416.25. I am sure of that. I never had that much money in a year or two.

It is stipulated that the bank book produced by the witness is a deposit book of the Manufacturers' Bank of Brooklyn, showing the account with "W. A. Hollman" and that the witness has correctly read the various entries in the book that appear between the dates referred to in his answer, and that this stipulation may be taken with the same force and effect as if the deposit book itself were offered in evidence.

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Q8. After you sold out your interests in the Maltby business to Mr. Congdon, did you have anything further to do with the Maltby shop?

A. I did not.

Q9. While you were connected with the Maltby shop was anything being done there in connection with a moving picture machine?

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A. There was because it was not finished when I left there.

Q10. What was being done while you were there?

A. They were about finishing the machine as I remember now.

Q11. Was there one machine or more?

A. One is all that I know as being built at that time. Why I am so positive is that after it was finished he asked me as well as my wife to come up to see it operated at his house at Sixth Avenue where he lived at that time, and called it my machine on account of the extension that I put on, or suggested to him on the paper film, more of a joke than anything else.

Q12. When was it that you suggested to him putting the tension on the film?

A. It must have been the early part of '95 before I left, before I sold out, because I don't remember doing anything after that.

Q13. While you were still at the shop, were there any tests made with the machine?

A. I think there was, but I won't be positive. In fact he showed me some difficulty he had in the breaking of the film, and that's why I suggested the releasing the tension of the paper film from the supply roll, can't call it anything else, to the receiving roll—running so fast, you see, it was liable to snap especially as the delivering roll was large, any one knows that paper is quite solid and heavy when it is rolled up close on a spool, hence it bothered him in manipulating the machine without breaking once in a while, which annoyed him very much—and he came into the office very downhearted after consulting with my partner, Mr. Maltby, and not getting any relief to overcome the breaking he appealed to me, saying, "Mr. Hollman, what do you know about this?" I thought he was joking

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and answered him, "Not much," as I did not know what he really meant. After explaining to me what his troubles were, I suggested the relieving spring; after trying it, it seemed to raise his ideas wonderfully and thanked me for it.

Q14. Who have you been referring to?

A. Mr. Chinnock, as he was the party in trouble, trying to get the machine to work. If I could remember the date of the invitation that he extended to Mrs. Hollman and myself to see the machine work, which could not have been very long after my selling interest in the Maltby Machine Co., but to tell any sane man as simple as it was it was valuable in that place.

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Q15. Do you remember the machine itself well enough to identify it?

A. I am afraid not at present. The reason is that after selling out the strain having been put on me as the financial end of the partnership was so great, that when I was released from that I went into brain fever inside of three or four months which has hurt my capacity for recollection very much.

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Q16. Outside of that one suggestion, what did you have to do with the constructing of that machine?

A. As far as I can remember is to look after the financial part of it, the mechanical part of it is the relieving spring, as I said before, that is about all, as Mr. Maltby had the entire supervision of the manufacturing part of it.

Q17. Will you look at the machine now on the table and see if there is anything about this machine, Defendant's Exhibit, Chinnock Camera, that you recognize?

A. Nothing only the supply and receiving rolls

and the relieving device, so far as I remember now, relieving the tension of the paper as it is rolled from one spool to the other.

Q18. The relieving spring you refer to is the one which you are now handling?

A. Yes, sir. It was I suggested it to him.

Witness refers to the spring arm near the bottom of the machine bearing on the film.

881 Q19. How frequently did Mr. Chinnock come to the shop while the camera was being constructed?

A. I should say every day, steady as clock work.

Q20. When you went to see the pictures with Mrs. Hollman, how were the pictures shown to you?

A. Through a machine, a glass on top of the machine, in a regular case, so that we saw them as they were delivered from the printing machine.

Q21. As you looked through the glass did you see the appearance of moving objects in the pictures?

882 A. I did, but being interested mostly in the suggestion that I gave him I watched that more than anything else. Mrs. Hollman was interested in what she saw on the paper, the pictures, more than I was. I wasn't interested in the picture part. I could not tell you now what the pictures were, but my eyes were on the film to see that it did not break, that is all.

Q22. It has been testified to that Chinnock had two kinds of machines, one to take the pictures and another to show them. Are you sure that the machine you saw at his house to show them was not a different machine from what the taking machine was?

A. I don't remember.

Q23. The fact is that beyond your recollection that Chinnock was having a moving picture machine made while you and Maltby were together and that you suggested the relieving spring for that machine, your memory about the machine is not very clear; is that correct?

A. Outside of that, no.

Direct examination closed.

Mr. Page: Entire deposition objected to as irrelevant and immaterial.

Cross-examination waived.

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Signature waived by consent.

ALVAH L. CHINNOCK, a witness called on behalf of the defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Alvah L. Chinnock; 157 Sixth Avenue, Brooklyn, N. Y.; salesman, L. Hecht & Co., Fifth Avenue Building, New York City; age, 35.

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Q2. What was your first knowledge of the producing of what are now known as motion pictures?

A. In the summer of 1894.

Q3. What did you learn about it that summer?

A. I was spending the summer at Madison, N. J., with my family, which included my father. At that time he was working on drawings which he told me were for the purpose of producing a machine or a camera which would take pictures at a great number a second. I was with my father every day and

can positively say that I saw him working on these drawings during July and August of that summer.

Q4. Did you spend any other summer at Madison except the summer of '94?

A. No, sir.

Q5. How do you fix this as the summer of '94?

A. I attended college at the Polytechnic Institute at Brooklyn. I did not finish my course at the Polytechnic and left in the spring of 1894. After leaving college I was associated with my father prior to the time of our going to Madison, which was some time in the latter part of June, to the best of my recollection. Naturally, a man can place a date very readily where it concerns his leaving college as it would naturally be impressed on his memory.

Q6. When did you return from Madison to Brooklyn?

A. Some time in the early part of September, possibly in the middle of September, not later than September, 1894.

Q7. What was the next thing you knew or heard about this camera after you returned to Madison?

888 A. My father told me that he had made arrangements to have the camera made. I know that almost every day, in fact, every day, he was in touch with the Maltby Manufacturing Company, whom my father told me was making his camera for him.

Q8. Did you see the camera completed?

A. Yes, sir.

Q9. When did you see it completed?

A. The camera was not at the house at that time and I saw the pictures which were taken by the camera some time during December, 1894—at any rate, positively before Christmas of the same year.

Q10. What, if you remember, was the subject of those pictures?

A. The first picture that I had ever seen taken with my father's camera was a so-called boxing bout between two amateurs, James W. Lahey and Robert T. Moore.

Q11. What did these pictures look like?

A. They showed the boxing bout in motion and was natural in the movements. They had the impression of life and of what are known as moving pictures of to-day.

Q12. How did you look at the pictures in order to see them give the impression of life motion?

A. My father had arranged what would be known now as a kinetoscope on the third floor of our house, had it covered over and had arranged a peep-hole at the top. The machine was turned and when the machine was turned it showed the result which I mentioned in my former answer.

Q13. Did you see any of these pictures before they were put into this kinetoscope?

A. Yes, sir.

Q14. What was their general appearance then?

A. As I remember them I should say they were a little more than an inch square. My father had printed them in strips I should say anywhere from a foot to a foot and a half long. These pictures had been developed and printed at my home, 167 Sixth Avenue, Brooklyn, on the third floor.

Q15. How do you fix it as positively prior to Christmas of '94 that you saw these Lahey-Moore pictures?

A. It has been our custom to hold a family gathering at our home every Christmas Day. This has been held with very few exceptions since 1894. I remember distinctly at this gathering that my

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Alvah L. Chinnock.

father showed the pictures in motion on his improvised kinetoscope to a number that were at the gathering.

Q16. After your father commenced at the drawings at Madison, did he have any other occupation than this one of developing moving pictures during the rest of that year?

A. No, sir.

Q17. What is your father's name?

A. Charles E. Chinnock.

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Q18. Please examine the paper I now hand you—Defendant's Exhibit, Agreement between Chinnock, Hough and Werner—and state if you know in whose handwriting the body of this agreement is?

A. It is in my own handwriting.

Q19. When did you write this, if you know?

A. May 3d, 1895.

Q20. Had you ever heard anything before this as to your father's intending to sell any camera or cameras?

A. Yes, sir.

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Q21. How long before, and what had you heard?

A. I cannot place the date exactly, but it was considerably before this that my father returned home one evening and told me that he had sold the camera machine for export. I should say, to the best of my knowledge now, that it was from three to six months prior to May, 1895.

Q22. What else prior to this agreement of May 3 had you known of in connection with the development of your father's moving picture business?

A. My father told me that the pictures were so successful that he had decided to go into the business commercially and manufacture kinetoscopes for exhibition purposes and for the sale of same.

Q23. Did he have any place of business for this work before the signing of that agreement?

A. Yes, sir; he had hired a shack or a shanty or house, whatever you might call it, in East New York—I think on St. Marks Avenue—had built a stage in the open and had rigged up some kind of a house for the camera with the end of the camera pointing towards the stage to take these pictures. I also remember a number of subjects that he had taken out there. I also remember producing one subject for him, a girl who did a dance, a skirt dance. I also remember seeing these pictures developed and printed.

Q24. Please examine the apparatus on the desk. Defendant's Exhibit, Chinnock Camera, and state what, if anything, you know about it?

A. To the best of my knowledge, knowing very little about mechanics, I would swear that that is the original camera machine with which my father took the pictures of James H. Lahey and Robert T. Moore. I also can swear positive that this is the machine that has been in the cellar of our house for at least 14 or 15 years.

Q25. During that 14 or 15 years, what have you understood from your father that this machine was?

A. The original camera that would take a number of pictures per second and would produce motion or moving pictures.

Q26. By the original camera you mean the camera that took the Lahey-Moore pictures?

A. Yes, sir.

Direct examination closed.

Mr. Page: Deposition objected to as irrelevant and immaterial.

Cross examination waived.

Signature waived by consent.

Defendant's counsel offers in evidence a duly certified copy from the office of the Secretary of State of the State of New York, of the Certificate of Incorporation of the Maltby Manufacturing Company, the certificate to the same showing that the original Certificate of Incorporation was filed and recorded in the office of the Secretary of State on September 6th, 1895, and the same is marked "Defendant's Exhibit Certificate of Incorporation, Maltby Manufacturing Company."

Mr. Page: Exhibit objected to as irrelevant and immaterial.

Adjourned subject to notice.

New York, N. Y., May 18th, 1911, 2 P. M.

Met pursuant to notice.

Present: Counsel as before.

JOHN A. MILLIKEN, a witness called on behalf of defendant, being first duly sworn, deposes and says in answer to questions by Mr. Eyre, as follows:

Q1. What is your name, age, residence and occupation?

A. John A. Milliken; age, 51; occupation, machinist; residence, Bayonne City, New Jersey.

Q2. During your work as machinist did you ever do any work in the shop of the Maltby Mfg. Co. of Brooklyn?

A. I did.

Q3. During what period did you do work there?

A. From the spring of '94 to the spring of '95.

Q4. During the time you were there who owned the Maltby Mfg. Co.?

A. Maltby and Hollman.

Q5. Was Congdon a part owner during any of the time?

A. In the spring of '95 I think he bought Mr. Hollman out.

Q6. How long after Congdon bought him out were you there?

A. I visited the firm a number of times, how many I couldn't say. I was very friendly with Mr. Maltby. I knew him a great many years.

Q7. While you were at the Maltby shop did you ever see any work done for one Charles E. Chinnock?

A. Yes.

Q8. What was the first work you saw done for him?

A. He was building a machine that had two side frames, there were a number of different rollers and gear wheels in it for feeding some kind of a paper. After the machine was further advanced Mr. Chinnock one day asked me if I knew what the machine was for and I told him that I thought it was some kind of a picture-taking machine. He said "yes." Why I remember the machine so well is, that two years previously I was building a machine for printing tickets which had a feeding mechanism something similar, and as this machine of Mr. Chinnock's had a peculiar stop movement for stopping the feeding of the paper it interested me very much. Therefore I paid a little more attention to the machine and its construction.

Q9. Do you remember just what it was about that stop movement that you noted especially?

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A. He had a stop movement that worked from a cam; I should describe it as a finger. There was a cam that operated this finger in connection with a friction on the feed rolls. When the cam operated and pressed this finger down on the platen it held the paper and prevented the paper from moving. That would make a friction; would act on the rollers. That would prevent the rollers from operating.

905 Q10. Just what is it that you mean by saying that friction roller would be prevented from operating?

A. Without the finger the paper would continuously feed, but when the finger is applied to the paper, why the friction slips or stops the roller.

Q11. Do you remember what was first done with this machine when it was finished?

906 A. I was living out in the suburbs of Brooklyn, St. Nicholas Avenue near Atlantic, and Mr. Chinnock wanted some place where he could take these pictures outdoors, and I suggested that he take the machine up to my house and they could there operate it. In fact, I think I carried the machine out myself.

Q12. How long did it stay at your house?

A. I think in the neighborhood of a week or two, if I am not mistaken; it might be more or a little less.

Q13. Did you ever see it after that?

A. Yes, I think I have, down at the shop.

Q14. How nearly can you place the time when this machine was taken to your house?

A. Well, it was—I know it was before cold weather, as I saw some of the films, I think, in a kinetoscope which was built later by Mr. Chinnock. That was in the winter I saw those.

Q15. Which winter do you refer to?

A. '94.

Q16. That is the winter of 1894 and '95?

A. Yes.

Q17. What was the subject of the first pictures Mr. Chinnock showed you?

A. I think it was a boxing match.

Q18. Did you know who the boxers were?

A. No, I never heard it mentioned who they were.

Q19. Will you please examine this machine on the table before you and state whether you can identify it? 908

A. Yes, that's the identical machine.

Witness is shown Defendant's Exhibit, Chinnock Camera.

Q20. Are all the parts of the original camera on this machine?

A. No.

Q21. What parts do you recollect that are not on the machine?

A. There was a revolving shutter here with holes in at, a disk. 909

Q22. Anything else missing?

A. The case is missing, the lens.

Q23. Will you please point out the stop movement and rolls that you were referring to awhile ago?

A. Stop movement here (indicating arm at the back of the clamp or platen). Cam here (indicating the cam on the outside of the side plate).

Q24. Which friction rollers were you referring to awhile ago?

A. I was referring to these rolls here, these top rolls.

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Q25. Do you remember who was working on this camera while it was at Maltby's shop?

A. I think it was a man named Pearson or Peterson; something of that name.

Q26. Will you please look at this photograph, Defendant's Exhibit, Photograph Maltby Shop, and state whether you can identify it, and if so, which of the persons therein you recognize, referring to them by number?

911 A. I identify the picture. One is Maltby; two is Hollman; three is Milliken, myself; four is Miller; five I don't recognize; six is Walter Blackburn; seven is Howard Barnes; eight is Howard Edge, I think, and nine is Greeves or Graves; ten I don't remember his name.

Q27. When have you last seen Chinnock or Maltby?

A. The last time I saw Mr. Chinnock I think it was the summer of '95. Maltby I have seen within the last six or seven years.

Q28. Have you talked with anybody familiar with this case recently except the man who came to see you representing us?

912 A. No.

Q29. At the time Chinnock was working on this camera in the Maltby shop, what were you doing?

A. I was building glass cutters and also an automatic water column.

Q30. Did you begin this glass cutter work before or after the time the camera was being made?

A. At the time the camera was being made.

Q31. Who was that work being done for?

A. Myself.

Q32. Is there any way of fixing the date when those glass cutters were made?

A. Yes, I believe there is. I sold some of the goods to Montgomery & Co., I think, 105 Fulton

Street; also a firm by the name of Wells, Curtan & Co. They moved, I believe, in the summer of '95 to Newburgh, and I think the firm's name is changed, Wells being out of the firm, and I don't know the present name.

Direct examination closed.

Mr. Page: The deposition objected to as irrelevant and immaterial.

Cross-examination subject to objection.

XQ33. Did you ever operate this camera? 914

A. In taking pictures, do I understand you?

Mr. Page: Yes.

A. No.

XQ34. Did you examine its construction carefully after it was finished?

A. Yes.

XQ35. Are you able to state now that it is in the same condition and contains the same parts that it had when you took it to your house?

A. Except in the parts that are not there, that I mention are not there. 915

XQ36. Are you sure that the lower pair of larger rolls were in that machine when you took it to your house?

A. I can state positively, yes, that all the rolls that are in there now, as far as my recollections go, are the same that were in there when I saw the machine operating with the roll of paper.

XQ37. Where did you see it operating with the roll of paper?

A. In Maltby's shop.

XQ38. You remember that when they were trying the machine with the rolls of paper the paper

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John A. Milliken.

was often torn between the lower reel and the clamping device operated by the paper?

A. No, I can't say that I do remember it being torn, that is after the machine was finished.

XQ39. What do you mean by after the machine was finished?

A. When the machine was ready for trial.

XQ40. Do you remember whether at that time there was in the machine a spring actuated arm bearing on the film or paper between the take-up reel and the lower pair of feed rolls?

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A. I don't quite understand that question.

XQ41. At the time when, as you say, the machine was ready for trial, was there in this machine a bar carried by two arms riveted to the side plates of the machine and held against the strip of paper by a spring and bearing against the paper at a point between the lower winding reel and the clamp operated by the cam?

A. Yes, it was there.

XQ42. Please see if that device is now present in the machine?

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A. Here it is here, connected with the cam here, connected with the two side plates.

Counsel for complainant notes that the witness indicates the clamp for the film operated by the cam.

XQ43. The part to which you refer in your answer was not the part that I had in mind in asking my question. What I wish to know is whether there was in the machine when you took it to your house any device below the lower friction rolls that was held by spring pressure against the film or paper before it reached the winding-up reel.

A. I would have to refresh my memory on that question. It is a number of years since I have seen the machine, and I would have to examine it a little more closely.

XQ44. When you stated that this is the identical machine that you took to your house, with the exception that it does not contain the shutter and the cover, you did not mean that you were positive that all of the details of this machine as it stands now were present in it at the time referred to, did you?

A. I mean to say that this, as near as I can remember, is identically the same machine in all the parts excepting those that I have previously mentioned.

XQ45. But now you have just stated that without an examination of the machine or refreshing your recollection you could not state whether there was any spring-actuated device bearing on the film between the lower feed rolls and the wind-up reel, and it is true, is it not, that you do not remember such a device or that you do not now remember whether it was in the machine or not when you took it to your house?

A. I do remember of an actuating device, as I have previously stated, actuated from a cam to hold the paper or film for a certain interval if that is what you are referring to, yes, it was there.

XQ46. But you do not remember any other device that was pressed against the paper continuously by a spring, do you?

A. I would have to look at the machine and examine it before giving an answer to that question.

XQ47. Please look at the machine and state if you remember whether this spring-actuated bar was present in the machine when you carried the machine over to your house. This bar bears on

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the film between the wind-up reel and the lower feed roll.

A. Yes, I remember it.

XQ48. Do you remember that that was in the machine when you took it over to your house?

A. Yes.

XQ49. Did you take the cover off of the machine after it went to your house so that you could see this spring-actuated arm?

A. No.

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XQ50. Then how do you know that this arm was in the machine at that time?

A. I saw the machine assembled and tried out, not once, but I can safely say, fifty times, and I was in a position where I could see every part of the machine made and put together, also every trial of every movement in the machine.

XQ51. When the clamp operated by the finger and the cam arrested the movement of the paper strip, did the paper slip through the upper feed rolls or did the latter stop?

A. I believe the feed rolls stopped, as the feed rolls were driven by friction.

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XQ52. When the paper strip was arrested did the lower friction rolls which I now have my finger on—these just below the clamp—did they stop also?

A. I can only remember the general principles on which these rolls operated.

Cross-examination closed.

Re-direct Examination by Mr. Eyre:

RDQ53. I am going to turn the main shaft of the machine and I want you to watch it and watch how the different sets of rollers turn, and then say

whether in view of what you see here you think that the rollers each constantly turned in the machine as you saw it in 1894.

Mr. Page: Objected to as irrelevant and immaterial. The witness has clearly shown even after examining the machine that he has no recollection of the operation, but being presumably a skilled mechanic he would of course be able to describe the operation when he sees it, and the value of his answer as evidence of recollection is not at all apparent, although his testimony as an expert might be instructive.

Mr. Eyre: In view of the statement just made, showing the agreement of counsel for complainant that the witness' recollection of the details of the feeding mechanism are incorrect, and showing therefore that he is not relying upon the witness' recollection to raise any question as to there being some different operation of the feeding mechanism at that time, the question is withdrawn.

Deposition closed.

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Signature waived by consent.

Counsel for defendant offers in evidence copy of an affidavit of Joseph F. McCoy, which copy was served upon defendant's counsel at the hearing on motion to reopen this case and used on said motion by complainant in opposition and the same is marked "Defendant's Exhibit, McCoy Affidavit," it being agreed that this copy may be used with the same force and effect as the original affidavit.

Defendant's counsel also produces five photographs of the camera, "Defendant's

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Howard H. Edge.

Exhibit, Chinnock Camera," and it is agreed that if C. W. Smith were recalled as a witness on behalf of the defendant he would testify that these five photographs were accurate photographs, properly taken by him of "Defendant's Exhibit, Chinnock Camera," and that the photographs were taken on Monday, April 24th, 1911, and it is further agreed that the foregoing stipulation may be taken with the same force and effect as if the said Smith had been duly recalled and had thus testified.

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Defendant's counsel offers the five photographs in evidence as "Defendant's Exhibits, Photographs Nos. 1 to 5, Chinnock Camera."

Mr. Page: The above exhibits objected to as irrelevant and immaterial.

Adjourned subject to notice.

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New York, N. Y., May 20th, 1911. 11 A. M.

Met pursuant to notice.

Present—JOHN C. KERR, Esq., for Complainant.
RICHARD EYRE, Esq., representing KENYON & KENYON, for Defendant.

HOWARD H. EDGE, a witness called on behalf of defendant, being first duly sworn, deposes and says as follows in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. Howard H. Edge; residence, Woonsocket, R. I.; occupation, superintendent of the Taft Pierce Mfg. Co.; age, 39.

Q2. Were you ever employed in the shop of the Maltby Manufacturing Co. of Brooklyn, N. Y.?

A. I was.

Q3. Will you please state what your period or periods of employment were with that company?

A. I was employed by the Maltby Mfg. Co. in two different periods. I first entered their employ in the fall, early fall, either August or September, in 1893. I remained with that company about one year. I then left their employ and went to work with the Garvin Machine Co., New York City, that being September or October, 1894, and I was with the Garvin Co. until about March, 1895, and then went to work for the International Postal Supply Co., of Brooklyn, and was with them several months and returned to the Maltby Co.

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Q4. You were away from the Maltby Co., then, from about the early fall of '94 for about a year, is that it?

A. About a year or fourteen months, yes, sir.

Q5. In what month and year were you married? 933

A. January, 1895.

Q6. Can you place certainly where you were working at that time?

A. I was with the Garvin Co., because I remember that the boys put some old shoes in my bag. I remember that.

Q7. Have you any definite recollection as to your having been working with the Garvin Co. for some months at that time?

A. Yes, sir. I know what I was working on at the Garvin Co. I went in their tool rooms under instructions. I was working on tools for making bicycle parts,—hub tools and other tools.

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Howard H. Edge.

Q8. Have you any recollection of a man in the Maltby shop by the name of Charles Pearson?

A. Not any definite recollection. I believe I heard his name mentioned, but I do not believe I would know him and I would not be sure that I could identify him.

Q9. Did you ever see any moving picture machinery being made in the Maltby shop?

A. I remember Mr. Chinnock being there and having some work done, but I have no knowledge of ever being assigned to that work.

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Q10. I show you a machine on the desk called Defendant's Exhibit, Chinnock Camera, and ask you whether you can identify it or not?

A. I would not say positively that I could, although I am inclined to believe that there was some such machine there during one of the periods that I was employed there. I know Mr. Chinnock's name. It was an unusual name and I remember that name being mentioned there.

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Mr. Kerr: In view of the last answer of the witness, the testimony which he may give with reference to the Chinnock Camera, including the last answer, is objected to as immaterial and irrelevant and it is requested that this objection should stand to all testimony with reference to this machine which the witness may hereafter give.

Mr. Eyre: That is entirely satisfactory, but it may be noted that this witness has been called simply because he has been referred to in the testimony and is shown on Defendant's Exhibit, Photograph Maltby Shop, and his testimony is more or less negative in character as it appears that he was the only one so far produced and shown in

that photograph who cannot identify the exhibit, and it also appears from his testimony that he was not at the Maltby shop at the time the witnesses say the exhibit was made.

Q11. Please examine Defendant's Exhibit, Photograph Maltby Shop, which I hand you and state whether you recognize the same, and if so, which of the persons appearing thereon you can identify? Please identify by number.

A. I recognize the picture as being that of the Maltby shop, as I have one of the same pictures, or I had one at the time. I identify the persons shown on the picture as follows: 1 is Frank Maltby; 2 Mr. Hollman; 3 is Mr. Milliken; 4 is Jack Miller; 5, I recognize the face, but I have forgotten the name; 6 is Walter Blackburn. He went by the name of Blackburn—the boys knew him as Blackburn, but his name is Blackbrough. 7 is Herbert Barnes; 8 myself; 9 is Clarence Graves, and 10 is Curtis Adams.

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Direct examination closed.

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Mr. Kerr: The objection above noted is here repeated to the whole deposition of the witness. I do not care to cross-examine.

Deposition closed.

Signature waived by consent.

Adjourned subject to new notice.

UNITED STATES CIRCUIT COURT,

SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY

vs.

INDEPENDENT MOVING PICTURES
COMPANY OF AMERICA.

In Equity.
On Latham
Patent
No. 707,934.

941

Testimony taken on behalf of defendant before Charles F. McKenzie, a Notary Public, acting as Special Examiner by consent, at the Post Tavern, Battle Creek, Michigan, beginning at 10:30 A. M., Tuesday, May 23, 1911.

Met pursuant to agreement.

Present—PARKER W. PAGE, Esq., Counsel for Com-
plaint.

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RICHARD EYRE, Esq., representing KEN-
YON & KENYON, Counsel for Defendant.

FRANK D. MALTBY, a witness called on behalf of the defendant, being first duly sworn, deposes and says as follows, in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and oc-
cupation?

A. Frank B. Maltby; 56; Battle Creek,
Michigan; mechanical engineer.

Q2. You are the proprietor of the Maltby Engineering Works, of Battle Creek?

A. Yes, sir.

Q3. Were you ever doing business, either alone or with others, in Brooklyn, N. Y., under the name of Maltby Mfg. Co.?

A. Yes.

Q4. When did you begin that business and when did you end it?

A. Some time in the spring of 1883. I think it was May. 944

Q5. When did you end it?

A. Continued for about 3 years.

Q6. Who was connected with you in the ownership of that business, at first?

A. William A. Hollman.

Q7. How long did you and he continue together?

A. About 2 years, we separated some time in March, '95, I bought him out.

Q8. After that how was the business run?

A. Same name, only by taking in Mr. Congdon, he took Mr. Hollman's place.

Q9. Was the company ever incorporated; if so, when? 945

A. After Mr. Congdon took hold with me, under the laws of the State of New York.

Q10. Where was this business located?

A. Columbia Heights, I think it was number 18 Columbia Heights, I am not sure about the number, Brooklyn, N. Y.

Q11. During the carrying on of this business at this place did you ever do any work for one Charles E. Chinnock?

A. I did.

Q12. And what was the character of this work?

A. I built him a camera for rapid picture taking.

Q13. Anything else?

A. Later we took a contract for kinetoscopes.

Q14. When and under what circumstances did your first conversation with Chinnock, as to this matter, occur?

A. Why, I met Chinnock one day while crossing the Brooklyn Ferry, and in conversation learned that he was living in Jersey. I asked him why he didn't live in the United States, and he says, "That's all right, I've got something that I want to talk to you about"; I said, "That's all right, let's hear it." He then asked me if I had a good shop for doing fine work. I told him I had, to come up and see me. That is about all at that time I remember now.

947 Q15. When was that?

A. That was some time in the summer of '93—no, it must have been some time in the summer of '94. Because we had been started in the manufacturing and making of machines for some little time.

Q16. Did he say then what sort of work he was going to have done?

A. No, he did not, he said he would let me know later.

Q17. What was the next conversation you had on this matter?

A. To the best of my recollection he came into my shop one day, during the middle of the summer with some drawings, and asked if I could give him a good man, to make a machine that he wanted to build. He seemed to be a little reticent at first, explaining what it was, but after he got it started, I said to him, "I know what you're making," he says "What is it?" I said "You're making a picture machine." "Well," he says, "keep it to yourself;" and that is about all; that is after we got to work on it.

Q18. What do you recollect as to the general nature of the drawings that he showed you—as to how complete they were?

A. They were complete enough for a Mr. Pearson, whom I employed, to go ahead and build the camera under the supervision of Mr. Chinnock.

Q19. When did you start Mr. Pearson at this work?

A. I should think somewhere in the neighborhood of September or October, '94. I know it was not later than October, '94.

Q20. Had you had Pearson in your employ before he started on this work?

A. I could not just say when Mr. Pearson came to work for me, but it was a short time, if at all, before he started on Mr. Chinnock's work.

Q21. How much of Pearson's time was devoted on his camera after he got started on it?

A. All of his time.

Q22. And how much was Chinnock around the shop?

A. The majority of the time.

Q23. How long did it take before the camera was completed?

A. I should think about two months, I am not sure.

Q24. What, if any, tests were made in the shop, of this camera?

A. Chinnock made a test with paper, to see if he was getting registration and positive stopping; I do not remember much about it, for I had turned Mr. Pearson over to Chinnock to do his work, and outside of a natural curiosity to see how the machine was going on, I did not interfere with it.

Q25. What do you now recollect about the mechanism of that camera and its operation?

952

Frank D. Maltby.

A. That it was a combination of mechanical devices to operate a strip of paper so that it might be fed and stopped before a photographic lens, said lens being alternately exposed and shut out from the light by a revolving shutter, said shutter being operated by suitable gearing so that all movements of paper and shutter were synchronized.

Q26. You remember what was the power to be applied to move the paper and lens?

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A. The reel of paper was mounted loosely on a spindle, then passed through a pair of feed rolls, then passed over the stop-plate when it was again controlled by feed rolls, then onto a receiving reel which was controlled by a friction movement.

Q27. Was there, if you remember, any loose portions of the paper, or loops formed?

A. There was a loop formed between the delivery reel and the stop-plate, also a certain amount of slack between the stop-plate and receiving reel; said slack was taken up by a spring arm, which was the suggestion of Mr. Hollman, and of which he felt very proud.

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Q28. Have you any recollection of the general appearance of the machine?

A. Why, yes, I have a general recollection of it, made up from heavy brass plates, and the usual amount of gearing—some of the gearing Mr. Chinnoch picked up. I recollect his buying and bringing over a pair of bevel gears which he said he purchased on Fulton Street, New York.

Q29. Please look at the apparatus on the table here (Defendant's Exhibit, Chinnoch Camera) and state whether or not you can identify it?

A. I would be willing to stake my mechanical reputation on the apparatus being the same, as constructed in my shop in '94. A small circum-

stance which occurred was this: Mr. Chinnock came to me and said, "Mr. Maltby, I want some light pulley put on the drive shaft, I don't care whether it is a round or flat belt." I gave him a pulley that looks identically like this one, and said to him, "This won't cost you anything, as one of the arms are cracked."

Q30. Are you able to find the crack on the pulley of this machine?

A. Down near the bulb somewhere—there it is (indicating) that appears to be the pulley.

Q31. Do you recognize the other portions of the camera?

A. In a general way, yes.

Q32. Will you please point out, if you find them present, the various parts that you have already referred to, viz.: the beveled gears Chinnock bought, the shutter, the spring arm controlling the slack that was suggested by Hollman, the supply reel and receiving reel, the friction movement for the latter, the stop-plate and the stop-movement therefor, and the two pairs of friction rolls that you referred to?

A. Those are the bevel gears (indicating) shown at "A" on Defendant's Exhibit Photograph 2, Chinnoch Camera. The shutter is not present on this machine, but was mounted on the shaft of the bevel gear and had narrow slits in it that were revolved in front of the lens which was screwed on the face of the machine at this point (indicating point marked "B" on Defendant's Exhibit Photograph No. 4, Chinnoch Camera). This shutter was a subject of consultation between Chinnock and myself one day, when I said to him, "Supposing these slits are not right in width?" and he said, "Oh, I'll fix that all right;" and some time later he

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said he had put on a double shutter which could be moved so as to open or close the slits. Here is the spring arm here (indicating the double arm with spring tension connected by a bar bearing on the film near the bottom of the machine). This is the supply reel, and this is the receiving reel (indicating respectively the top and bottom reels). Here is the set of friction rolls right here (pointing to feed rolls just below the supply reel). There was another set below the stop-plate to take the paper away (pointing to rolls just below the stop-plate). The friction movement for the receiving reel is here, driven by the belt (indicating the mechanism on the shaft of the lower reel and the belt). Here is the stop-plate, and that is the movement actuated by this cam (indicating the plate between the two sets of friction rolls and the arm pressing on the back of the plate, and the spring and cam controlling the shaft carrying that arm).

Q33. Was this camera completed, and out of the shop before Hollman left?

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Mr. Page: Objected to that question as leading.

A. It was completed in the fall of '94.

Q34. Were you ever shown any pictures said to have been made on that camera?

A. Yes, at one time, I had three sets of pictures; one was a boxing scene, another was a series of pictures of Fatima, Egyptian Muscle Dancer, also a blacksmith shop scene.

Q35. How early were you shown the first of these?

A. Some time late in the fall, possibly it was close to mid-winter, I don't remember exactly.

Q36. You remember anything as to who were the subjects for the boxing scene?

A. I do not remember.

Q37. Did you ever make any other cameras for Chinnock?

A. To the best of my recollection, we made one or more cameras, some time in the early spring of '95.

Q38. Have you any means of identifying this particular exhibit shown you as the first, rather than a later camera?

A. Nothing except that the work is in more of a crude state.

Q39. Do you mean that you recollect that the later camera were better finished in detail?

A. They were.

Q40. How many kinetoscopes did you make for Chinnock?

A. I think we had a contract for about 50 machines, I am uncertain as to quantity. The quantity was so large, however, that I was obliged to rent another floor directly below the shop.

Q41. When were these kinetoscopes made?

A. Some time during the spring and summer of '95. They may have been begun in the latter part of the winter of '95.

Q42. That is, you mean they may have been begun in the latter part of the winter of '94 and '95?

A. Yes, sir.

Q43. I now show you a photograph, marked in this case as Defendant's Exhibit, Photograph Maltby's Shop, and ask you if you recognize the same as the Columbia Heights shop, and also ask you to state which of the persons therein you recognize?

A. No. 1 is myself; No. 2 is my former partner,

Mr. Hollman; No. 3 is John Milliken; No. 4, I would know his name if I would hear it, I don't remember it myself; No. 5, I don't recollect his name; No. 6, I don't recollect the name; No. 7 was a young apprentice, first name Herbert, just for the minute I don't recollect his name—Herbert Barnes, my wife's cousin; No. 8 was Howard Edge; No. 9 was a young apprentice by the name of Graves; No. 10, I don't remember the name. I have since thought of No. 4—Miller. This picture is a portion of the shop, looking towards Columbia Heights.

Recess.

Q44. Do you remember Walter Blackburn, or Blackbrough?

A. Blackburn, that is his name. That is him, No. 6.

Q45. Do you remember Curtis Adams?

A. Curtis Adams, the only one that could possibly be him is this little chap over here—if there is anybody that could be Curtis Adams, would be No. 10; I am not sure of him.

Q46. Besides those on the photograph, did William Edge, Charles O. Pearson, Harry C. Lohman, and George Thompson work for you at that shop?

A. You don't say when; at the time the photograph was taken, you mean? Or what time?

Q47. At or about the time that Chinnock's camera was being made?

A. I am a little in doubt as to when Thompson came with me, he would know more about whether he was there at that time than I would; to the best of my knowledge they were there, I know that Lohman was.

Cross Examination by Mr. Page:

Mr. Page: It appearing that the testimony given by this witness is purely cumulative evidence of irrelevant and immaterial facts, it is objected to, for that reason and as being a mere padding of the record with immaterial and irrelevant testimony. Cross-examination is subject to the above objection.

XQ48. You have stated that you had three sets of pictures, which you understand were taken by Mr. Chinnock's camera or cameras; in what form were those pictures?

A. The first picture that I saw—first set of pictures was a boxing scene, with about a dozen pictures; the strip was about an inch wide. This set of pictures was handed me by Mr. Chinnock, with the remark, "This is some of our first work." The later pictures that I received were of the same general nature, with the exception of the subjects.

XQ49. That is, these pictures were positive prints on paper strips about an inch wide, and 12 inches long?

A. I don't know, there were about a dozen pictures, I don't know what the length was, I didn't measure them.

XQ50. Do you know who mounted the pictures on the cylinders of the kinetoscopes that you made for Mr. Chinnock?

A. It was done by Mr. Chinnock or someone with him, I don't remember; I saw him assembling one.

XQ51. Was this work done at your shop?

A. Do you refer to the mounting of the pictures?

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XQ52. Yes.

A. In this one instance, yes.

XQ53. But in the other cases, this work was not done under your observation, was it?

A. It was not under my observation. And I am not sure whether it was done in the shop or outside of it.

XQ54. Can you recall anyone who was assisting Mr. Chinnock in this work of mounting the pictures?

A. I cannot.

XQ55. Did you know F. R. Chinnock, a brother of Charles E. Chinnock?

A. I have met him and been introduced to him. But never had much to do with him.

XQ56. Did he have, to your knowledge, anything to do with the making of the kinetoscopes, or the using of the Chinnock cameras, for taking pictures for these kinetoscopes?

A. I do not know.

XQ57. Have you any data or records in your possession which have assisted you in fixing the various dates for the incidents about which you have testified; or have you been relying entirely on your recollection?

A. It is all a question of memory, with the exception of things I have pointed out on the machine shown to me.

XQ58. You have stated that the drawings that Mr. Chinnock showed you some time during the middle of the summer of 1894, were complete enough for Pearson to go ahead and build a camera, under the supervision of Mr. Chinnock; is that answer a mere conclusion on your part, that these drawings were sufficient for that purpose, or did you examine them sufficiently yourself to know that they were?

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A. I only made a cursory glance examination of the drawings, as it was understood that I was to turn them over to Mr. Pearson, and that Mr. Pearson follow the drawings more or less in the construction of the machine.

XQ59. Then I am right in assuming that your answer to Q18 was not based on positive information, but was a conclusion on your part that these drawings were complete, am I not? (Question and answer shown witness.)

A. I think the results will answer for themselves.

Mr. Page: Answer objected to as not responsive.

XQ60. Of course you do not know, do you, just how much information Pearson got from these drawings, and how much he got from Mr. Chinnock to enable him to construct the first camera?

A. I recollect one day in particular when there was some uncertainty about the stop motion and cam which actuated the same, Mr. Chinnock said to Pearson, "You had better follow the drawings, as that has been carefully worked out."

Mr. Page: Answer is objected to as not responsive.

Mr. Eyre: Complainant's counsel must have found the answer too responsive.

Mr. Page: I call attention to the purely gratuitous character of this remark.

XQ61. I am only asking you for your best information and recollection, and not for opinions or conclusions; and my question was: Do you know how much information Pearson obtained from Chinnock, or, as a matter of fact, how closely he

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actually did follow the original drawings in making the first camera?

A. I couldn't tell you.

XQ62. Can you give the Court any further details from recollection of the tests which Mr. Chinnock made with his first camera? Anything that you may recall about the kind of paper he used, the number or lengths of the tests, or the results?

A. No; only in a general way that such tests were made, and that he used paper to test the registration of the different parts of the machine.

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XQ63. Do you know whether he changed the machine at all after these tests?

A. Not to any extent, some minor details; one being the arm that Mr. Hollman suggested.

XQ64. One of the witnesses, I think Mr. Hollman, has stated that Mr. Chinnock came to you for information or help in preventing the tearing of the paper by the machine before the spring arm was adopted; but that you failed to give him any relief; do you recall that circumstance?

A. I do not.

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XQ65. Do you recall in what respects the later cameras differed from the first camera constructed?

A. They were intended to be duplicates, with perhaps a little more elaboration in the method of finishing them up. As Mr. Chinnock asked me if I was ready to take extra machines to build on contract, and I asked him if they were to be like the old ones, and he said, "Yes, with some few minor details."

XQ66. Did you ever operate one of these Chinnock cameras, either for testing its registration or for taking pictures?

A. I did not. I simply saw the results.

XQ67. Did you ever hear Mr. Chinnock, or any

of those associated with him in the taking and mounting of the pictures, make the statement that the spacing between the pictures was irregular?

A. I never did.

XQ68. Did you ever hear them make the statement that the alignment of the pictures in the strips was imperfect? Owing to the tendency of the film to shift sidewise between the friction rollers?

A. The only thing that I ever heard relating to this question that you have asked me, Mr. Chinnock cautioned Mr. Pearson that he must make the rollers of the same diameter from end to end, and that the two sets of rollers must be absolutely in line and parallel to each other.

XQ69. Do you know, as a matter of fact, that one of the principal difficulties that was encountered in the making of the kinetoscopes was due to the fact that the pictures in the strips were not evenly spaced and were also out of alignment?

A. In answer to that question would say that I examined one of the kinetoscopes that had been completed and ready for shipment to Coney Island, and tested it by putting in a nickel, and that the action was very satisfactory; the pictures seemed to move cleanly and truly in line.

XQ70. But you do not know whether the pictures in that kinetoscope had been cut up and adjusted both for spacing and alignment, do you?

A. I know that they looked like one continuous strip from one end of the cylinder to the other, and I doubt the practicability of anyone taking a crooked strip, badly spaced and out of line, and producing the result that I saw.

XQ71. Did you examine the strip of pictures on the cylinder of this kinetoscope to ascertain

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whether or not it had been cut up into short sections?

A. I did not, as I had no occasion to do so.

Re-direct Examination:

RDQ72. When you first saw the pictures of the boxing contest, what did you observe as to the character of the photographs and their registration on the strip?

983 A. The photographs seemed to be very clear and distinct; in fact, I might say they were clear and distinct, and the strip appeared to be straight, and as far as the naked eye could discern, without proper measuring instruments, they were equally spaced.

RDQ73. What is the last that you have known as to the books and other records of the Maltby Mfg. Co.?

984 A. The winter of '95 and '96. Possibly I may be mistaken, possibly in the winter of '97, early in the fall. There is one method of ascertaining exactly by going to the National Accidental Policy Company of New York, who paid me money for an accident. By getting that data I could tell when I last saw the books.

RDQ73½. Do you know what became of them then?

A. I do not—no—except that Mr. Congdon took possession of them.

Re-cross Examination:

RXQ74. You have used the expression in your last preceding answers "The fall," referring to a season; do you mean by using this expression any time up to a period "close to midwinter," as you

stated in answer to Q35? (Q35 and answer shown witness.)

A. I mean just exactly what I said in the answer; I couldn't put it any other way, except to state it would be late fall or early winter, that is what I intended to convey.

RXQ75. You mean, you intended to convey that in answer to Q35?

A. I intended to convey that it was late fall and possibly early winter, I couldn't exactly state; a question of one or two months, one way or the other.

Deposition closed, and signature waived by consent.

It is agreed that the Notary need not certify the foregoing deposition, but that the original may be kept in the custody of defendant's counsel and filed with the Clerk of the Court.

Adjourned to the office of Mundy, Evarts, Adecock & Clark, Chicago, Ill., at 10:30 A. M., Wednesday, May 24th, 1911.

UNITED STATES CIRCUIT COURT,
SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-
PANY

vs.

INDEPENDENT MOVING PICTURES
COMPANY OF AMERICA.

In Equity.
On Latham
Patent
No. 707,934.

Testimony taken on behalf of defendant before Pearl Abrams, a Notary Public, acting as Special Examiner by consent, at the office of Mundy, Evarts, Adcock & Clarke, 907 Marquette Building, Chicago, Illinois, beginning 10:30 A. M. Wednesday morning, May 24th, 1911.

Met pursuant to adjournment.

Present—PARKER W. PAGE, Esq., Counsel for Com-
plainant.

RICHARD EYRE, Esq., representing Ken-
yon & Kenyon, Counsel for Defend-
ant.

GEORGE S. THOMPSON, a witness called on behalf of the defendant, being first duly sworn, deposes and says as follows, in answer to questions by Mr. Eyre:

Q1. What is your name, age, residence and occupation?

A. George S. Thompson; age, 47 years; 2118 South Springfield Avenue, Chicago. I am foreman of the cable press department of the Western Electric Company.

Q2. Were you ever employed with the Maltby Manufacturing Company of Brooklyn, New York?

A. Yes.

Q3. What was that Company and where was it located?

A. A partnership.

Q4. Where was it located?

A. At Doughty Street and Columbia Heights.

Q5. Who were the partners?

A. There was Frank Maltby and William Hollman.

Q6. What period of time was it that you worked there?

A. I worked there from the latter part of August, 1893, and over a period of about a year and a half.

Q7. Was Mr. Hollman still a partner when you left?

A. He was.

Q8. After you left, did you visit the shop again?

A. No, I never visited the shop afterward.

Q9. Did you see anything of Mr. Hollman after that?

A. Yes.

Q10. Did you know anything about his selling out his interest in the shop?

A. Yes, he told me about it.

Q11. And how long was that after you left their employ?

A. Several months, I couldn't say positively.

Q12. Did you know of this at the very time he sold out, or later?

A. It was previous to his having sold out.

Q13. That is, it was previous to his selling out that he told you he was about to sell out?

A. Yes.

Q14. While you were with the Maltby shop, did

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you see any work being done on moving picture apparatus?

A. Yes.

Q15. Who was that being done for?

A. A Mr. Chinnock.

Q16. When was that work being done?

A. Why they were working during the latter part of my employment with the Company.

Q17. Please state what you recall as to the character of this apparatus?

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A. It was a machine to take pictures in a continuous strip or a film. The machine operated as follows: This film was in the form of a spool or bobbin, and unwound from this spool onto another one. There was an intermittent movement, the film would move and then stop and then continue. The machine movement was produced by a crank on the side of the machine. That perforated disk they had there, rotated in front of an eye, and there were a number of holes in the disk. Further than that I don't recall much about it.

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Q18. Please examine the apparatus in evidence herein, as "Defendant's Exhibit, Chinnock Camera," and state whether you can recognize the same?

A. I would say that this is the identical machine that I have attempted to describe that was made by the Maltby Co.

Q19. Where was the disk with holes in it carried, if you remember?

A. Right in the front, connected with the shaft here (witness pointing to the screw thread on the front of the horizontal shaft), and passing in front of this eye here (pointing to the circular hole in the front of the machine).

Q20. Have you any recollection about how this shaft was driven?

A. The movement was communicated to a pair of beveled pinions or gears.

Q21. Do you remember whether there were any tests of this apparatus in the Maltby shop?

A. The machine had been tried by unwinding the film of paper from one bobbin to another and noting the different movements.

Q22. Do you remember Howard Edge?

A. I do.

Q23. Were you at his wedding, and if so, when was that?

A. I was at his wedding January 21st, 1895.

Q24. Was he working with Maltby at that particular time?

A. He was.

Q25. Do you remember his working for the Garvin Co.?

A. Yes, he left the employ of the Maltby Co., to go with the Garvin Co.

Q26. Are you sure that he was not with the Garvin Co. at the time he was married?

A. I think he was with the Garvin Co.

Q27. And where were you working at that time?

A. With Louis Weiss, to my recollection.

Q28. I show you a photograph, and ask you whether you recognize the same, and if so, what it is?

A. This is the Maltby Mfg. Co.

Q29. Do you remember whether you were there when that photograph was taken?

A. I was in their employ when that photograph was taken.

Q30. Please identify any of the persons thereon that you recognize?

A. No. 1, Mr. Maltby; No. 2, Mr. Hollman; No.

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3, Mr. Milliken; No. 4, Mr. Miller; No. 6, Mr. Blackbrough; No. 7, Mr. Herbert Barnes; No. 8, Mr. Howard Edge; No. 9, Mr. Graves, and No. 10, Mr. Adams.

Q31. One or two of the witnesses thought that No. 5 was yourself. What do you recall about No. 5?

A. Well, as having been personally acquainted with him at one time, but not recalling his name at present.

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Q32. Do you remember who was doing the main part of the work on this Chinnock camera?

A. He was a short stout man, and from appearance, I would say he was a Swede.

Q33. Do you remember any men by the name of Lohman and William Edge, working with Maltby, while you were there?

A. I do.

Q34. Do I understand that the man who was working on the Chinnock camera, was neither Lohman, William Edge, nor any of the men on this photograph?

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A. Neither of those you mention, nor any of those on the photograph.

Mr. Page: The deposition is objected to as irrelevant and immaterial, and as purely cumulative evidence of wholly irrelevant and immaterial circumstances.

Cross-examination waived.

Signature waived by consent.

Deposition closed.

Defendants rest.

REBUTTAL PROOFS.

HARRY NORTON MARVIN, recalled in rebuttal on behalf of the complainant.

Direct Examination by Mr. Church:

Q160. Mr. Marvin, have you examined, and are you familiar with the evidence that has been offered in this case respecting the so-called Chinnock camera, and if so state whether or not you understand the construction of that so-called camera? A. I am familiar with the evidence that has been given, and I understand the construction of the camera.

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Q161. Will you please describe in your own words what you understand to be the structure of the Chinnock camera, so far as relates to the means therein for supporting and moving film? A. The Chinnock device for handling film comprised two supports for the bulk of the film, located, one at the upper part, and one at the lower part of the machine. Between these supports was located an intermittently operating feeding device adapted to move the film intermittently, not positively and regularly, but variably. This intermittent feeding device consisted first in a clamping member adapted to intermittently clamp the film firmly and prevent its movement. The next element comprised a pair of frictional rollers running at a relatively high speed between which the film was pinched. The function of these continuously acting friction feed rollers was to draw a quantity of film through the clamping device when the clamping device was released. Below the continuously running friction rollers was the frictionally driven take-up reel running at a speed designed to main-

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tain a constant drag upon the film. This is the structure of the early Chinnock device, according to the testimony, and the intermittent feed of the film was accomplished by the co-operation of these two elements in the following manner. When the clamping device held the film, the continuously running friction rollers revolved against the surface of the film, straining the film as much as the friction between the rollers determined. And the take-up reel exercised a supplementary drag upon the film. The combined drag of the take-up reel and of the continuously running friction wheel being positively resisted by the clamping device, the film normally remained stationary below the continuously running reels and for a short distance above the clamp including the space occupied by the exposure window. When the clamp was released, the continuously running feed rollers pulled down film through the clamp and past the exposure window, being assisted in this operation by the tug of the frictionally driven take-up reel. The movement of the film through the clamping device and exposure window continued until the clamp again operated to pinch the film, when the film was again subjected to the strain of the continuously running feed rollers and the frictionally operated take-up reel.

1007 In a later modification of the Chinnock device, according to the testimony, a spring actuated arm was introduced between the continuously running feed rollers and the frictionally operated take-up reel. The function of this spring actuated arm appeared to be to equalize the drag of the take-up reel upon the film between the take-up reel and the continuously running feed rollers. With this modification of the structure, the drag upon the film during the time that the clamp was

pinching it, consisted of the sum of the drag of the continuously running feed rollers, plus the drag of the take-up reel, as determined through the spring actuated arm, which tended to deflect the pull of the film from a straight line between the feed rollers and the take-up reel. According to the testimony, the effect of this spring actuated arm was to reduce the tendency of the film to be torn apart between the clamp and the take-up reel, when the clamp was holding the film tight, and when the film was subjected to the strains above indicated.

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Above the intermittent feeding device and between the exposure window and supply reel were located an additional pair of friction feed rollers. These rollers revolved at a lower peripheral speed than the intermittently acting feed rollers before described; and their function appears to have been to measure out during each cycle of operation of the machine a quantity of film approximate to that necessary to replace the quantity of film exposed at the exposure window during the time the film was at rest. When the clamping device was released, the continuously running feed rollers below the clamp, acting in connection with the spring actuated arm and the frictionally driven take-up reel, pulled down film that had been fed from the upper friction rolls during the time that the clamp was holding the film taut, through the upper feed rollers, the film at this instant being strained taut between the upper feed rollers and the lower feed rollers. The action of the upper feed rollers in feeding the film from the supply reel was supplemented and augmented by additional strain due to the operation of the continuously running feed rollers and the action of the frictionally driven take-

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- up reel. This action continued until the clamp operated again to pinch the film and hold it. By the continued operation of the machine, therefore, the film was intermittently advanced past the exposure window with a more or less irregular movement. There was not at any time any positive engagement of any of the operating devices with the film. The film used was presumably unperforated, because there were no teeth anywhere in the mechanism adapted to co-operate with any sprocket holes in the film, no means of any form for positive engagement of the film being designated. It will be noted that the amount of movement of the film through the cycle of operation was dependent upon the sum of a number of variable quantities, comprising, in the first place, the resistance of the mass of the film upon the supply reel to rotation; secondly, the frictional pressure of the upper feeding rollers upon the film; thirdly, the firmness of the grip of the intermittently acting feeding device; fourthly, the frictional pressure of the continuously operating feed rollers upon the film; fifthly, the stiffness of the spring actuating the spring actuated arm; and sixthly, the frictional drag of the take-up reel, all acting upon a substance of variable thickness and having variable surface friction.

It will be noticed that the organization of this machine was such as to indicate that it was not intended to handle film in such a manner as to relieve the film from tension or strain during operation. The whole operation of the structure was based upon subjecting the film to strain and tension. It will be seen, further, that there was in the machine no means for insuring the regular presentation at the exposure window of successive, equally spaced portions of film. It is apparent that the machine

might be used with some degree of success for the purpose of moving the film so that there may be photographed upon it a succession of unevenly spaced photographs, provided the machine was so adjusted that the strains to which the film was subjected did not break the film during the process; but it is obvious that the machine could not be used for moving film for the purpose of bringing before the exposure window a series of photographs arranged lengthwise on the film, for the purpose of motion picture projection. It is apparent that the mechanism could not be used for the latter purpose because there is no means indicated for insuring the proper register of the successive photographs with the exposure window, a result absolutely necessary where pictures are to be projected on a screen, because without such means, successively projected pictures would not occupy the same position upon the screen.

Therefore, in the case of unevenly spaced pictures, successive pictures would appear to dance upon the screen in such a manner as to obliterate the picture, and in the case of evenly spaced pictures, this result would be supplemented by a continual creep of the pictures, either up or down the screen, as the errors of movement of the film were accumulated in successive exposures. It will be noted further, in considering this Chinnock structure, that its organization would not permit the use of two feed wheels adapted to positively engage a perforated film.

In order to make this point clear, let us imagine that the upper pair of feed rollers that draw film from the upper supply reel were provided with sprocket teeth that would engage the perforations in the film, and that all other parts of the ma-

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chinery were left unmodified; with such construction it is obvious that with the sprocket teeth bearing upon the slender parts of the film that lie between adjacent sprocket holes, these slender parts would have to sustain the entire strain caused by the friction drag of the continually rotating friction wheels, supplemented by the drag of the take-up reel as transmitted through the spring arm at the moment when all of the surplus film had been taken up and when the film was jerked taut by the intermittently acting devices against the upper toothed feed roll. This strain would invariably result in tearing out the sprocket holes of the film, if not on the occasion of the first time the film was run through the machine, then, certainly after a few repetitions of its use.

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Let us suppose now that, in the second instance, the machine remained exactly as it was originally, except that the quickly running lower feed wheels located below the clamp were provided with sprocket teeth that engaged the film. In this case, it is perfectly evident that when the clamp seized the film and stopped it from moving, the continued revolution of the sprocket wheels must inevitably immediately tear out the sprocket holes in the film.

Let us finally suppose that both sets of feed rollers were equipped with sprocket feeds. Then, it is obvious that both of the results before indicated would occur simultaneously and to an increased degree. It is evident, therefore, that the construction of the Chinnock machine renders it fundamentally incapable of being operated with positively acting toothed feed wheels. It will be noticed as another feature of this machine that the intermittently operating feed wheels located below the clamp have nothing whatever to do with

measuring the quantity of film that is advanced past the exposure window at each cycle of the operation, the quantity of film so advanced being determined, as before stated, by the feed of the upper feed rollers, modified by the drag of the upper supply reel and the drag of the lower feed wheels and the lower take-up reel and the tension of the clamp.

Q162. Have you examined and do you understand the construction and operation of the apparatus disclosed in the French patent to Marey of 1890, Defendants' Exhibit No. 15? A. I have and I do.

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Q163. Will you please compare the structure of that Marey patent with the structure of the Latham patent in suit, and point out any similarities or differences that occur to you as pertinent? A. The Marey French patent of 1890 embodies a mechanism for supporting and moving a quantity of film. The structure embodies first, two supports for the bulk of the film, a fixed support adapted to hold the supply of film before it has been used, and a frictionally rotated support adapted to receive the film after it has passed through the machine. Between these two supports is an exposure window, and between the exposure window and the take-up support or reel is a pair of continuously running frictional rollers, between which the film passes and by which it is pinched and fed. Adjacent to the exposure window is a clamping device adapted and geared to intermittently clamp the film and hold it stationary, and between the clamping device and the frictional feed rollers before described, is a spring arm or tension device. The operation of the machine is as follows: As the parts revolve, the frictional feed rollers draw

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film from the supply reel through the exposure window and through the clamping device and around the tension member and deliver it to the take-up reel, the frictional revolution of which winds the film up as it comes from the supply roll. When the intermittently operating clamp acts, it seizes the film near the exposure window and holds it stationary, while the take-up reel continues to feed film forward by stretching it around the tension member and deflecting the tension member, thus exposing the film to strain. When the pressure plate is released, the combined action of the tension member, the continuous feed rollers and the frictionally driven take-up reel pulls quickly forward a more or less indefinite quantity of film from the supply reel through the exposure window, the tension member during this process returning apparently to its approximately original position. The clamping member then acts again and clamps the film, the motion of which is thereby arrested, and this cycle is continued indefinitely. During the interval when the film is at rest in the exposure window, a photographic image may be registered on the film, and thus a series of photographs of an object in motion may be impressed upon successive portions of the film with more or less irregularity. This device is not capable of being used for motion picture projection by the projection of a series of photographs of successive phases of moving objects arranged in succession along the film, because no means are provided for insuring accurate registration of successive images at the exposure window. The film at all times is exposed to severe strain and tension.

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Q164. Have you examined and do you understand the structure set forth and shown in the

Marey French patent of 1893, being Defendants' Exhibit No. 18? A. I have and I do.

Q165. Will you please describe briefly the structure of that patent, as you understand it? A. The Marey patent of 1893 discloses a structure suitable for supporting and moving a body of film. The structure of this Marey patent of 1893 only differs from the structure of the Marey patent of 1890 in that the continuously running feed rollers, which in the patent of 1890, are located between the clamping device and the take-up reel, in the patent of 1893 are located between the supply reel and the clamping device. The operation of the device is as follows:

Assume that the clamping device is operating and holding the film stationary, adjacent to the exposure window, the frictionally driven take-up reel is then rotating and winding up film by drawing it taut against the clamping device and deflecting the spring arm or tension device located between the clamp and the take-up reel. Meantime, the continuously running frictional feed rollers are drawing off film from the supply roller, which film is accumulating in the form of slack between these frictional rollers and the clamping device. When the clamping device is released, the combined operation of the frictionally driven take-up reel and the spring tension device, is to drag the film quickly through the clamp and exposure window and draw it taut against the frictional feed rollers, and the film continues to feed through the clamp and exposure window, with such speed as the frictionally driven feed rollers and the supply reel permit; the film at this instant being taut throughout its whole length from the supply reel to the take-up reel and exposed to more or less

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severe tension between the take-up reel and the frictional feed rollers. The motion of the film is again arrested by the action of the clamp and the operation repeated indefinitely. The mechanism may possibly be used for obtaining a series of photographs of moving objects upon a film by making photographic impressions at the exposure window during the period when the film is stationary. The structure, however, is not adapted to be used for motion picture projection by projecting a series of motion pictures arranged upon that film, because there is no means indicated for bringing each successive picture into accurate registration before the exposure window. The feed of the film being largely dependent upon the combination of a number of simultaneously acting variable forces, namely, the frictional drag of the take-up reel, the varying tension of the take-up spring, the varying frictional gripping contact of the clamp, the varying frictional feed and the continuously running feed rollers, the inertia of the supply reel and the varying thickness of the film and the frictional condition of the surface of the film.

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If the continuously operating feed rollers in this device were replaced by sprocket wheels engaging holes in the edges of the film, the remainder of the structure remaining unchanged, the result would doubtless be to tear out or injure the bridges between the sprocket holes in the film at the time the grip was released and the film was jerked forward by the combined action of the frictionally driven take-up reel and the spring tension device, which at that time would jerk the film suddenly against the sprocket teeth. In the device in this patent there are no positively acting toothed feeding wheels for withdrawing the film from the supply reel and delivering the film to the winding

reel, no slack portion of the film between the film feeding wheel and the delivery reel and no positively acting toothed intermittent wheels, acting intermittently to feed the slack portions of the film.

Recess until 1:45.

After recess at 2:00 P. M.

HARRY NORTON MARVIN, resumes the 1034 stand.

Direct Examination by Mr. Church (continued) :

Q166. Have you examined and do you understand the construction and operation of the structure shown in the Gray patent of 1895, Defendants' Exhibit 25, and if so, please explain the same? A. I have and I do. The Gray patent of 1895 discloses a structure for supporting and moving a quantity of film. The structure consists of two supports for the bulk of the film, one a fixed support adapted to receive and hold the film before use and the other a fixed support adapted to receive and hold the film after use. Adjacent to the rolls of film upon the two supports, and co-acting therewith, are positively driven frictional contact rollers bearing against the rolls of film, and operating to respectively wind the film off from the supply reel and wind the film onto the receiving reel by co-acting with the respective rolls of film and their supports.

Between these two supports for the film are arranged two similar intermittently acting feeding devices, each comprising a pair of hooks traveling

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back and forth along the film with a reciprocating motion and intended to be adapted to move the film by the engagement of their teeth with the perforations in the film.

These two intermittently acting feeding devices are designed to operate alternately, one feeding while the other is not feeding. It is evidently the intention of the patentee to indicate that, by the action of these two intermittently acting feeding devices, that portion of the film between the supports will be intermittently advanced. Adjacent the hooks of each intermittently acting feeding device is an exposure window at which the film is apparently supposed to be held stationary for a portion of the time including that part of the time when the hooks are returning from one stroke in order to engage with the succeeding set of holes in the film.

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The action of the device is supposed to be as follows: The effect of the positively driven continuously rotating frictional feed roller that bears against the supply roll of film unwinds the film and provides an indefinite amount of slack film in advance of the first intermittently acting feeding device.

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The intermittently acting feeding device engages the holes of the film and pulls the film downward, or away from the supply reel intermittently while the second intermittently acting feeding device engages the film behind the first intermittent device and pulls forward at each operation a quantity of film equal to that previously pulled forward by the other intermittently acting feeding device.

The positively driven frictional roller that bears against the take-up reel of film revolves the roll and winds onto it the film supplied by the second intermittently operating feed device.

The patent indicates a proposed method by which this structure may be employed for the purpose of photographing upon successive portions of the film a succession of images and moving objects. These objects are photographed in two series, one series being photographed upon the film at one exposure window and the other series being photographed upon the film at the other exposure window, the path of the film being deflected between the two windows so that these series of photographs form two sequences of images arranged lengthwise upon the film side by side.

It is apparent that this device could not be successfully used for manipulating a body of film of considerable magnitude such as is necessary to use in the commercial projection of motion pictures because the feeding of the frictional rollers in contact with the rolls of film with the supply and take-up supports, would be so uncertain in its operation that one of two results would happen. In the first place, considering the action of the supply reel, the frictional feed from this reel would be either too little, in which case the film would be torn by the action of the hooks in their effort to pull downward the film against the drag of the entire mass of film upon the supply reel, or else the feed would be too great, in which case the film would accumulate in a loop between the window and the supply reel and thus eventually clog the machine and become tangled and break.

Second, in case of the take-up reel, the feed would be either too much, in which case the film would be drawn taut and out of register when the reciprocating hooks were returning for another grip, and the hooks would therefore not engage in the succeeding holes of the film and the machine

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would cease to operate, or else the feed would be too little, in which case slack film would accumulate and become tangled and clog the machine, either of which results would be fatal to the satisfactory operation of the machine for projection.

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The drawings of the patent do not appear to have been made from an operative model for the following reasons: First, no provision is indicated for protecting the sensitized film from the action of light other than that forming the image at the exposure window and, secondly, because no means are indicated for withdrawing the reciprocating hooks from the perforations at the end of a stroke so that they may return for engagement in the successive holes. In order to cure this defect, it would be necessary either to provide means not shown for withdrawing the hooks from the perforations in the film at the end of the stroke or for putting sufficient tension upon the film at the end of the stroke so that the beveled hooks would rise out of the holes. No such means are shown.

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But whether the Gray device could be made to operate or not, it certainly does not show positively acting toothed feeding wheels for withdrawing the film from the film supply reel, or delivering the film to a winding reel, or any slack portion of the film between two such film feeding wheels, nor a toothed intermediate wheel acting intermittently to feed the slack portion of the film positively.

Q167. Have you examined and do you understand the British patent to Greene and Evans of 1889, being Defendants' Exhibit 12, and if you do, will you please briefly describe your understanding of the mechanism therein shown? A. I have and I do. The Greene and Evans patent embodies a mechanism for supporting and moving a quantity

of film. The structure embraces two supports for the bulk of the film, a fixed support adapted to hold the supply of film before it has been used and a frictional rotating support adapted to receive the film after it has passed through the machine. Between these two supports is an exposure window. Adjacent to the fixed support for the supply of unused film is located a frictional roller adapted to give frictional contact with the reel of film upon the fixed support, and by frictional contact to rotate this reel of film so as to feed the film off from the reel.

The patent discloses two methods of mounting and driving this frictional feed roller, one method constituting an intermittent frictional drive and the other a continuous positive drive. Beyond the exposure window there is an intermittently acting spring driven roller having toothed projections adapted to nip the film frictionally, but not to perforate it. The operation of the device is as follows: The rotation of the main shaft operates to wind up the spring driven feed device and at the same time pay off an indefinite quantity of film from the supply reel. In the meantime, the frictionally driven take-up reel is pulling the film taut between the intermittently acting feed device and itself. When the intermittently acting spring driven feeding device operates, it pulls through the exposure window a certain amount of film, taking up all, or a part, of the slack film that has been fed over from the supply reel, and possibly straining the film taut against the supply reel. This action continues until the intermittently acting spring driven feed device has made a complete revolution. In the meantime the frictionally driven take-up reel starts to

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wind up the slack film supplied by the intermittently acting spring driven feeding device and continues to act until all of the film advanced by the intermittent device has been taken up with a jerk, again straining the film.

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This device may be employed for obtaining a series of photographs of moving objects arranged in sequence along the film by making suitable photographic exposures at the exposure window during the period when the film is at rest. This device would not produce uniformly spaced pictures and could not be used for motion picture projection by the projection of a series of photographs of successive phases of moving objects arranged in succession along the film, since no means are indicated for insuring accurate registration of successive images at the exposure window.

The operation of this device would expose the film to a succession of more or less severe jerks or strains.

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Q168. There are three patents relating to the manipulation of a web of paper in a printing press, which have been offered by the defendants, namely, the patent to Kidder of 1880, marked Defendants' Exhibit 5, the patent to Eckerson of 1890, being Defendants' Exhibit 6, and the patent to Cox of November 14th, 1893, being Defendants' Exhibit 7. State whether you have examined these patents and are familiar with the structures therein disclosed? A. I have examined them and am familiar with the structures therein disclosed.

Q169. Will you please give us a description of the relevant parts of those structures, taking up each patent in turn? A. These patents all relate to printing presses, a class of machinery quite distinct from the mechanism employed in the motion picture art. These printing presses are ordi-

narily bulky machines comparatively slow acting, and the necessity for microscopic registration that exists in this motion picture apparatus is entirely absent in printing presses.

United States patent to Kidder of 1880 discloses supports for the bulk of a roll of paper suitable for receiving impressions in a printing press. Between these supports there is provided a frictional intermittent feed that feeds the paper along by a frictional engagement with an intermittent motion. Between the supply reel and this intermittent feeding device is indicated a frictional feeding device comprised of two small rollers running in frictional contact with each other, between which it is arranged that the paper shall pass and by rotation of which it is assumed that the paper will be constantly drawn from the supply reel and fed forward. This friction feeding device, from its nature, cannot feed the paper uniformly and positively, as a certain amount of slippage is bound to occur that will vary from time to time. In fact, in the patent, adjustment devices are provided by means of which the operator may from time to time modify or correct the quantity of paper fed forward from the delivery reel so that the operator obviously may, by personal attention, maintain a suitable amount of slack paper between the delivery reel and the intermittent feed.

Means are also indicated for modifying from time to time, as the machine operates, the quantity of slack paper between the intermittent frictional feed and the take-up reel. But the take-up reel itself acts to wind up the paper, and no device independent of the take-up reel is indicated for taking up slack paper and delivering it to a take-up reel.

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The device is not intended to be used for perforated paper, nor would it operate continuously and automatically if any of the feed rollers were provided with teeth that engaged with holes cut into the paper.

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United States patent to Eckerson of 1890 indicates also a printing machine mechanism. In this machine a supply of paper in the form of a roll is carried on a support, from which support it is drawn with an intermittent motion by means of frictional feed rollers that revolve with an intermittent motion and whose function it is to supply an indefinite quantity of slack paper, which, after passing through a frictional drag, is supposed to be acted upon by an intermittently acting feeding device. After the paper passes through the machine it may be cut into sheets or rolled upon a frictionally driven reel after passing through a frictional tension device, the purpose of which is apparently to equalize the drag of the frictional take-up reel upon the intermittent feeding device.

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The mechanism here disclosed is obviously not adapted to the manipulation of a perforated sheet of paper by engagement with the perforations and could not be so adapted by the substitution of toothed wheels for the smooth frictional rollers employed for the reasons stated in the testimony on the Kidder patent.

United States Patent to Cox of 1893 also discloses a printing machine mechanism. The entire structure and operation of this device is so absolutely different from the mechanism of the patent in suit and so obviously could not be employed for the purpose of moving a motion picture film for the purpose of projection that more detailed criticism seems unnecessary.

Q170. Have you read and do you understand the patent to Thomas Armat, No. 673,992 of May 14, 1901, Defendants' Exhibit 31, and if so will you please describe the structure therein represented so far as it relates to the means for sustaining and feeding the film, and after you have done that, will you please compare it with the structure of the Latham patent in suit and state the result of that comparison? A. I have and I do. United States Patent to Armat of 1901 indicates a mechanism for supporting and moving a body of flexible film for the purposes of motion picture projection. The mechanism comprises supports for the film before and after exposure, the film before exposure being mounted upon a fixed support and after exposure being received upon a frictionally rotated support.

Between the supports of the film are located two continuously rotating toothed drums, the teeth of which are adapted to engage with holes cut in the edges of the film. The film passes from the supply reel partly around the upper continuously rotating toothed feeding wheel and thence across an exposure window, and then partly around the lower continuously rotating toothed feeding wheel from which it passes to the receiving reel. Between the two continuous feeding wheels and below the exposure window, is located a disc having thereon an eccentrically placed pin constituting a cam so arranged that by its revolution it shall press against the film and distort the path of the film from the exposure window to the take-up reel during a part of the revolution of the eccentric pin.

The operation of the machine is as follows: Assuming that the eccentric pin is not in contact with the film, the upper feeding reel is drawing film

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from the supply reel and delivering it in the form of a loop above the exposure window. The lower feeding wheel is taking up the slack from below the exposure window and delivering it to the take-up reel.

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As the eccentric pin revolves it strikes against the film between the exposure window and the lower feeding roller and as it continues to revolve the eccentric pin draws down film through the exposure window. The eccentric pin by its continued revolution intermittently draws down successive portions of the film through the exposure window, the film at the time of its being drawn being made taut between the exposure window and the lower feeding wheel. It will be noted that this structure differs from the structure of the patent in suit in that the intermittent feed of the slack portion of the film is accomplished by the frictional contact of the eccentric pin or cam with the surface of the film, and not by the engagement of the teeth of an intermittently rotating member.

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This structure could obviously be used for motion picture projections by projecting a series of pictures arranged upon a strip, but it is not as well adapted to that purpose as the structure shown in the patent in suit.

The exact amount of film drawn down by each revolution of the eccentric roller, or beater, as it is commonly called, depends upon the frictional tension upon that portion of the film that lies between the two continuously operating feeding rollers. The Armat structure indicates two tension members, one of which is supposed to be intermittently relieved during the time when the beater is drawing down the film. The film by the action of this device, in consequence of the rapidity with which it must operate, is drawn down rapidly, and if

the tension in the tension devices is arranged very lightly so that little friction is given to the film, the film is likely to overrun by its momentum. If, on the contrary, the tension is excessive, the film is likely to be stretched between the continuously running feed wheel below the window and the window itself where the tension device is located.

Varying conditions of the surface of the film operate to increase these errors so that the device, while capable of giving a motion picture exhibition, is not as well suited to the conditions of practical use as the mechanism disclosed in the Latham patent. Great nicety of adjustment, great care in maintaining adjustments, are necessary in the structures of the class disclosed by the Armat patent.

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Q171. What would be the result of the repeated use of a motion picture film in a projecting machine such as disclosed in the Armat patent as contrasted with the result of the repeated use of the same film when used in an apparatus constructed in accordance with the disclosures of the Latham patent in suit? A. The result of the repeated use of a motion picture film in a structure like that disclosed in the Armat patent would be to wear out and destroy the film very much more quickly than it would be worn out or destroyed by the repeated use in a structure like that shown in the Latham patent in suit. The beater roller that draws down the film intermittently in the Armat patent rubs against the surface of the film and the effect of its repeated action is to scratch the surface of the film and, in projection, these scratches seriously mar the projecting picture so that eventually the picture is practically destroyed. The effect of the scratches that appear on the picture is like an apparent rainstorm which is a result very

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familiar to those who have witnessed motion picture exhibitions.

In order, apparently, to protect the part of the film where the perforations are made, the inventor indicates in Fig. 8 that the ends of the roller that would ordinarily rub against the film in line with the perforations may be cut away so as to relieve this portion of the film from wear and tear of the blows and rubbing action of the beater. But this remedy would serve to intensify the destructive action of the beater upon the picture bearing surface of the film.

Q172. In what way? A. By scratching it and defacing it.

Q173. Are there on the market projecting machines constructed in accordance with this Armat patent of which you have any knowledge? A. Not to my knowledge.

Q174. At the present day, would it be regarded as a practical device as contrasted with the device constructed as shown in the Latham patent in suit, I mean, commercially practicable? A. I should not consider it so.

Q175. Do you find in this Armat patent any description or indication that Armat ever intended to use an intermittent toothed feeding device in the place of his beater? A. I do not.

Q176. Do you find in the patent any disclosure of modifications of the beater device, and if so, how many? A. I find in the patent a disclosure of several modifications of the beater construction, namely, those indicated in Figs. 9, 10 and 11 of the patent which are additional to the structure indicated in Fig. 2 of the patent.

Q177. Would you regard it as a forward or backward step of the art to now employ a device

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such as is shown in the Armat patent with this beater arrangement as contrasted with the positive toothed feeding arrangement of the Latham patent in suit? A. The use of the beater device of the Armat patent would, in my opinion, certainly be a step backward in the art and if universally so adopted would result in serious detriment to the art.

Q178. Turning now to the Joly French patent, No. 249,875, Exhibit 27, dated August 26th, 1895, the construction of the device shown in that patent please state whether you have read and understand ent? A. I have and I do.

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Q179. Will you give a brief description of the material parts of the mechanism of that patent that are adapted to sustain and feed the film? As the drawing of the corresponding United States patent to Joly, No. 569,875, Defendants' Exhibit 29, is somewhat clearer than the drawing of the French patent, I will ask you to have that before you in making your answer. A. The patent to Joly to which you have referred discloses a mechanism for handling a quantity of flexible film comprising two supports for the bulk of the film, a fixed support for receiving the film before exposure and a frictionally driven take-up support for receiving the film after exposure, and two continuously operating rotary-toothed feeding reels, one designed to draw film from the upper support and deliver it into a form of a loop above an exposure window. Below the exposure window is a reciprocating device, the operation of which tends to distort the path of the film below the exposure window. Below this reciprocating device is another continuously running toothed-feeding device engaging holes in the film, that delivers film con-

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tinuously to the lower friction take-up reel. The reciprocating device located below the exposure window operates to intermittently feed the film across the exposure window in a manner substantially the same as that indicated in the Armat patent to which I have just referred. The general plan of operation of the Joly apparatus in respect to the movement of the film is substantially the same as that of the Armat patent above referred to.

1073 Q180. And does Joly, in either his French or in his United States patent, suggest the use of a toothed intermittent feeding device instead of his beater arrangement? A. He does not.

Q181. In the United States patent to Joly, No. 569,875, an alternative form of intermittent feeding device is apparently described. I refer to page 2 of the patent, lines 85 to 89, inclusive. Will you read on the record that description and state what you understand it to refer to? A. The statement appearing in the specification is as follows:

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"The frame N can (without departing from "the invention) be replaced by an eccentric "roller which will communicate to the film the "same movement as the frame."

I understand this to be a suggestion that the reciprocating, or oscillating frame, through which the film passes below the exposure window, and the oscillation of which serves to deflect the course of the film and thus draw it through the exposure window, may be replaced by an eccentric roller, the revolution of which will produce upon the film the same effect as the oscillating frame, the two structures being substantially identical in their operation.

Q182. Have you examined the Casler patent, No. 466,495, being Defendant's Exhibit 33, and if you have, do you understand the construction and operation of the apparatus therein disclosed? A. I have and I do.

Q183. Will you please make a brief description of so much of that apparatus as relates to the support and feeding of the film and then make a comparison of it with the apparatus of the Latham patent in suit, and state the result of such comparison? A. The Casler patent of 1901 discloses a mechanism for supporting and feeding a quantity of flexible film. This apparatus is designed to handle unperforated film. It comprises an upper and a lower support for the bulk of the film, between which supports is located an exposure window. Adjacent to the exposure window is an intermittently operated clamp adapted to pinch the film and prevent its movement. Between the supports are two continuously operating frictional feed wheels, one located adjacent to the upper support and adapted to draw film continuously from the upper support, the other being located adjacent to the lower support and adapted to continuously deliver the film to the lower support. Between these two sets of continuously operating feed wheels is another set of continuously operating friction rollers, between which the film passes, and by which the film is gripped. The operation of the machine is as follows: The revolution of the upper friction feeding rollers draws the film from the supply reel and delivers it in the form of a loop above the exposure window where the film is clamped fast by the intermittently acting clamp. In the meantime the continuous feed rollers located below the exposure window are revolving

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and straining the film taut between the clamp and themselves. And the lower continuously feeding friction roller is taking up the slack film that exists between the continuously running feed rollers below the exposure window and itself and delivering film to the frictionally driven take-up reel.

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When the clamp at the window operates and releases the film, it is drawn downward rapidly across the exposure window by the continuously running friction rollers located below the window. These rollers run at a higher peripheral velocity than do the other continuously feeding rollers, so that by their operation they pull out slack that has accumulated above the exposure window and strain the film taut against the upper feed rollers. They then continue to pull down the film as rapidly as it is delivered by the upper feed rollers until the intermittently acting clamp again seizes the film and stops its motion.

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In this patent, means are indicated by which the relative rotation of the feed wheels and the operation of the clamp may be varied from time to time by the operator in order that the successive variations in the pitch of the successive pictures may be corrected so that the creep of the film before the exposure window may be avoided, thus enabling the operator to maintain the successive pictures continuously in registration before the exposure window.

This structure differs from the structure of the Latham patent in suit in that it discloses no toothed rotary feeding device that engages with holes in the edges of the film separate and distinct from the supports, and that feeds the film positive-

ly and regularly, and no rotary toothed intermittently acting feeding devices.

This device of the Casler patent is adapted to be used in projecting a series of pictures on a film by means of the continual manipulation of the operator, but it is not adapted to automatically project a series of motion pictures, because no means are indicated for automatically maintaining the presentation of successive pictures in register at the exposure window.

Q184. Without asking you specifically to describe the structures disclosed by the following patents offered in evidence by the defendant, namely, the Le Prince patent No. 376,247, Defendants' Exhibit 11; the Edison patent No. 491,993, Defendants' Exhibit 21; the Edison patent No. 493,426, Defendants' Exhibit 22; the Edison patent No. 589,168, Defendants' Exhibit 23; the Mayer patent No. 525,991, Defendants' Exhibit 24, and the Latham patent No. 600,113, Defendants' Exhibit 34, I will ask you whether you are familiar with those patents and the structures therein described, and whether or not the structures of any of those patents embody the combination of toothed feeding wheels for drawing from independent supports and delivering film to independent supports, and an intermediate toothed feeding wheel for causing an intermittent feed of a slack portion of the film between the toothed feeding devices? A. I am familiar with those patents and none of them disclose a mechanism embodying the elements that you have described.

Q185. Taken as a whole, what improvement or advantage, if any, does the structure of the Latham patent in suit present over any individual structure shown in any individual patent or structure

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of the prior art to which your attention has been directed?

Mr. Jeffery: I object unless the question will be limited to the structure which is described in claim 7 in suit.

Mr. Church: The witness may limit his answer to that structure.

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A. The Latham patent in suit discloses a structure that is superior to any structure disclosed in any of the patents to which reference has been made, in the means for manipulating a body of flexible film of considerable bulk so as to feed it across an exposure window intermittently with positive quick movement without subjecting the film at any part, or at any time, to any severe tension or strain and to move the film intermittently across the exposure window in a manner uniform as to equally space perforations along the edges of the film, and independent of the linear dimension of the film as affecting the pitch of the perforations.

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This mechanism is further adapted to so move the film automatically and without the continued manipulation or adjustment of any part of the mechanism other than supplying of power by hand or otherwise to the main shaft.

Q186. What are the physical elements of this mechanism by which the result you speak of is attained? A. The physical elements are first two supports for the bulk of the film, a fixed support adapted to receive the film before use and a frictionally rotated support adapted to receive the film after use. Between these supports and entirely disconnected from them are two toothed rotary feed wheels adapted to continuously draw

film from the supply reel and deliver it to the take-up reel, and to respectively produce and take up slack film, and an intermittently acting rotary toothed feeding device located between the two continuously operating toothed feeding devices and adjacent to an exposure window, and adapted to feed the film across the exposure window with an intermittent motion; all of these feeding devices having teeth adapted to engage equally spaced perforations made in the edges of the film.

Q187. When in your testimony you have spoken of a maintained slack portion, or maintained loop, or loops, what do you mean, and how is the maintained slack or the maintained loops provided in the actual operation of the machine? A. By the maintained loops referred to in the description of this mechanism and its operation, is meant the quantity of slack film that exists between the upper pair of continuously running toothed feed wheels and the intermittently operating toothed feed wheel, and between the lower pair of continuously running toothed feed wheels and the intermittently operating toothed feed wheel. This slack or loop of film is adjusted by the operator when he threads the machine. It may be of any convenient magnitude.

After the machine has been threaded and the machine started in operation, the total quantity of the slack film between the two sets of continuously operating toothed feeding wheels never varies, but this slack portion is intermittently fed across the exposure window. The purpose of this loop, or slack portion of film above and below the exposure window is to relieve the film from strain under the action of the intermittent feeding device and establishes, with reference to the movement of the

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film, substantially the same condition that would exist were the film only a few inches in length instead of being possibly a thousand feet in length, as is customary in commercial practice.

But no matter how long the film and how large the bulk of film contained upon the supports, the total weight of film to be manipulated by the intermittent device consists always only in that slack portion which lies between the two continuously feeding devices.

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Q188. What is the function and purpose of the so-called framing device in a projecting machine?

A. The framing device is a device which is added to the machine proper for the purpose of facilitating the handling of the machine by the operator. It will be noted in all of these devices to which reference has been made that there is what is called an exposure window, an exposure opening. When the device is used for the purpose of projection, the projection is made when the picture upon the film is held stationary in front of this window. It is obvious that if the picture is held in front of the window in such a way that the picture does not perfectly match the window, but that the dividing line between adjacent pictures appears at the window, this will be produced upon the screen where the projection is made, and instead of the screen showing one picture it will show parts of two pictures.

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It is obvious from a study of this mechanism as disclosed, for example, in the Latham structure, that when a perforated film having thereon a series of equally spaced pictures is threaded into this machine, the operator must exercise care in order to have the picture just match the exposure window. It is common practice, in fact universal

practice, to have four perforations on each side of the film for each picture. When the operator fits the picture over the teeth of the sprocket wheels it is obvious that if he fits the film over the teeth of the intermittent sprocket wheel, which is then at rest, in such a way as to have one picture completely match the exposure window, the picture would be properly projected upon the screen. If, on the other hand, he should carelessly move the film along one or two holes so as to have parts of two pictures in the exposure window, the parts of two pictures would be projected on the screen and the result would be bad. Therefore the operator in threading up the machine must exercise care and place the film properly in register with the exposure window. But it frequently happens that several scenes of motion pictures of several hundred feet in length, or perhaps less, are spliced together, and it is obvious that when such pictures or films are spliced together by gluing, that in splicing them care must be exercised so as to maintain the register of successive pictures. If an error is made in splicing so that where two successive scenes are joined, adjacent pictures do not follow each other in proper sequence, then when such a film is passed through the projecting machine, when we arrive at the splice, the picture will get out of register with the exposure window.

Before framing devices were used, it was necessary for the operator in such a case, to stop the machine and re-thread it so as to bring the picture into proper register with the exposure window when he could continue again until he came to another break. It would also sometimes happen when machines were badly constructed, or badly worn, or a film was in bad condition, that

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sometimes a film would jump on the sprocket teeth and automatically get out of register. This occurred but seldom, but sometimes it did occur, and when it did occur it necessitated the stoppage of the exhibition for the purpose of again registering the picture with the exposure window.

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In order to avoid that trouble, it has been customary to apply to the machine means for shifting the relative position of the exposure window with the film while the machine was running without necessitating stopping the machine. This has been accomplished in a variety of ways but the device for accomplishing this is commonly known as a framing device. The framing device in no way modifies or affects the projection of the series of pictures on a film so long as the sequence of pictures is uninterrupted and the machine and film operate in a normal manner. It is only called into use when an abnormal condition arises and when it is necessary to correct an error that has arisen in the way I have described. It has nothing whatever to do with the successive registration of the successive pictures in the series. It is simply, as I have stated, a device to enable the operator to practically re-thread the machine, or accomplish the same result that could be accomplished by re-threading it, in order to bring the single picture in register with the exposure window without stopping the machine.

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Q189. Does the so-called framing device modify the action of the mechanism for supporting and feeding the film at all? A. Not the slightest degree.

Q190. What is the difference between the shutter commonly employed on projecting machines and the shutter commonly employed on a camera, a mo-

tion picture camera? A. Well, in the case of a shutter employed on a projecting machine, the relative size of the opening of the shutter and the opaque part of the shutter is ordinarily fixed and is not adjustable; that is to say, in a projecting machine shutter, the opening may constitute fifty per cent. of the total circumference of the shutter, the other fifty per cent. being opaque. This open part may be divided into two or more subdivisions by the introduction of intermediate opaque parts, or may not, as the case may be. In the shutter for a camera, however, the opening is ordinarily made adjustable, so that the angular size of the opening may be varied from time to time according to the conditions under which objects are to be photographed. This shutter is commonly made adjustable from an opening of fifty per cent. down to a mere slit. Now, in practice, it is customary to use shutter openings varying from ten per cent. of the circumference up to fifty per cent. of the circumference, so that in making a picture of a slow moving object on a dark day, an operator would probably use a shutter opening of approximately fifty per cent., in which case the magnitude of the opening would be precisely the same as the magnitude of the opening in shutters commonly used in projecting machines. On the other hand, if the operator wanted to photograph a rapidly moving object in brilliant sunlight, he would be likely to reduce the shutter opening to about ten or fifteen per cent.

Q191. State whether or not there is any shrinkage or change of dimensions of a motion picture strip after it has been taken out of the motion picture camera and developed? A. There is. A motion picture negative, on being developed,

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shrinks considerably. The shrinkage, however, is variable, and depends to some extent upon the method of treatment in developing and in drying.

Q192. At what rate are motion pictures ordinarily taken and projected at the present time? A. About sixteen pictures per second.

Q193. What was the rate in 1895, for instance?
A. In 1895?

Q194. 1895? A. In 1895, the practice was to run at a higher speed, upwards of thirty per second; sometimes forty per second in the Edison kinetoscope.

Q195. Mr. Marvin, have you had any practical experience in the operation of cameras or projecting machines, which used purely friction devices for manipulating the film strip? A. I have.

Q196. In cameras having such frictionally driven mechanism, are the pictures produced equally or unequally spaced? A. In frictionally driven cameras they are always unevenly spaced. I know that very extensive, very serious, efforts have been made under my direction to overcome that difficulty. But in spite of a variety of devices and the greatest possible refinement in the mechanism, I have never known it to be possible to produce a frictionally operated camera that would produce uniformly spaced pictures.

Q197. Where friction devices were employed in a camera and unequally spaced pictures resulted, what expedient, if any, was adopted to produce the positives that would be equally spaced? A. The process of producing equally spaced positives from unequally spaced negatives was a little involved. In the beginning, it involves the—

Q198. I do not ask you to go into all the details, but just state the result. A. I can tell it briefly, I think.

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Q199. Yes? A. In order to obtain uniformly spaced positives from irregularly spaced negatives, it was necessary to perforate the negative film with registry holes at the time the photographic exposure was made. These registry holes were subsequently used in a special printing machine to correct the irregularities in the spacing of the negative, and to print regularly spaced positives. These regularly spaced positives were then suitable to be used in special projecting machines.

Q200. When you got your regularly spaced positives and used them in projecting machines, in which the film was frictionally driven, what then did you have to do to keep the pictures uniform in register with the exposure opening? A. In spite of the greatest efforts, we found it impossible to produce a frictionally feeding projecting machine to handle unperforated films that would maintain the successive pictures in register at the exposure window, for no matter how perfectly the machine was constructed and how perfect the spacing of the positive pictures upon the film, we found that the accumulating errors of registration would constantly operate to make the picture appear to crawl up or down on the screen. For example, supposing we should set the frictional feed device so as to feed the height of one picture as exactly as we could—but in practice we might find that it was feeding one-thousandth of an inch too much. That thousandth of an inch would be negligible between adjacent pictures, but after we had progressed ten pictures it would amount to ten one-thousandths, and after we had fed a thousand pictures it would amount to an inch, which would be the total height of the picture. We found it impossible to so adjust the machine that it would continue to feed

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perfectly. The machine was, as you may express it, in a condition of unstable equilibrium. In order to correct this and to make it possible to use the frictionally driven machines with unperforated film, we resorted to the expedient of putting in a regulating device by which the feed of the machine could be constantly varied. Then, as the operator watched the picture upon the screen, when he found the picture beginning to creep up a little, he moved his handle down, and that changed the feed of the machine a trifle so that the picture would commence to travel down, and when it got down a little ways, he would move it up again, and then the picture would commence to travel up, so that the picture projected by a frictionally driven device of that kind always appeared to gradually seesaw up and down the screen a little, and could only be made approximately central by the continued vigilance of the operator. If he were to leave the machine for the fraction of a minute, the picture would creep entirely off.

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Cross Examination by Mr. Jeffery:

XQ201. Mr. Marvin, a good deal of the testimony you gave here to-day with respect to the prior patents and the Chinnock machine was read from notes, was it not? A. Yes.

XQ202. And I take it you prepared those notes yourself? A. I did. I dictated them.

XQ203. They have not been revised since you dictated them by anyone except yourself? A. They have not been revised. Mr. Church read them over. In one or two cases he changed a word or two, grammatically; but the substance is the same identically as when I dictated them first.

XQ204. When did you dictate them first? A. I dictated them, I guess, about two weeks ago.

XQ205. That was before you had heard Mr. Hammer's description of these same devices of the machine? A. Oh, yes.

XQ206. Now, is it your opinion that the Latham device is adapted to be used on a camera? A. On a camera?

XQ207. Yes. A. Yes. What I understand you to mean by the Latham device—

XQ208. I mean the device shown in the Latham patent, and the device which you claim is set forth in the seventh claim of that patent? A. Yes, sir.

XQ209. You were familiar with the suit of your Company against the Independent Motion Picture Company, were you not? A. Generally familiar, yes, sir.

XQ210. You testified as a witness in that case? A. I don't know whether I did or not. I am not sure. I want to be honest about it. I think probably I did.

XQ211. Yes, your name is here in the complainant's testimony, page 384? A. Yes.

XQ212. Do you remember that you testified in that case with respect to certain suits which you said had been brought by the American Mutoscope and Biograph Company after its acquisition of the Latham patent against a number of concerns which you named? A. Yes.

XQ213. You said that some of the suits were for the use of infringing cameras, and some for the use of infringing projecting machines; is that right? A. Yes.

XQ214. And do you remember the device which in the suit against the Independent Company was claimed to be an infringement and was testified

1114 *Harry Norton Marvin.*

to by your expert as being an infringement? A. That was the—I think there were two, the Warwick—

XQ215. The Warwick camera was at least one of the devices claimed to infringe in that suit, was it not? A. Yes.

XQ216. And do you remember the intermittent device used in the Warwick camera? A. Yes.

XQ217. What was it? A. It was a reciprocating hook.

1115 XQ218. A reciprocating hook? A. Yes; for the intermittent movement.

XQ219. It was a hook which engaged in the holes of the film and pulled it along? A. Yes.

XY220. Are the feed rollers positively driven in the Chinnock machine? A. Yes, I believe they are positively driven.

1116 XQ221. Now, what do you mean by "positive engagement" of the film in your reference to the Chinnock machine? You speak there of positive engagement of the film? A. Can you tell me whereabouts I refer to positive engagement? I may have referred to that as positive engagement of the clamping device. Show me the part of the answer to which you refer.

XQ222. I don't mean to say that you said that the film was positively engaged in the Chinnock camera, but in your reference to that machine and in your description of it you mentioned the words "positive engagement of the film." Now, what did you mean by that, "positive engagement of the film"? What is positive engagement of the film? A. Well, it is hard for me to answer that without knowing the particular expressions used, because in this description I have used the words positive engagement to mean the engagement of sprocket

teeth with perforations in the film, but I may also have used the same expression with reference to a friction grip which seized upon the film and held it so that it could not be moved without tearing it to pieces.

XQ223. Would you think the term "positive engagement" would cover such a device as you have last mentioned? A. The friction grip?

XQ224. The friction grip, yes? A. Not in the sense in which I have used the term when applied to the engagement of a film by teeth entering holes.

XQ225. That is the sense in which you used positive engagement when you referred to the Latham patent; is that correct? A. Yes, I think so. I might use that interchangeably, and I might not; I don't know.

XQ226. By that term "positive engagement," do you mean that the teeth of the sprocket enter the holes along the edges of the film for the purpose of positively advancing the film? A. In speaking of the Latham device, that is what I mean.

XQ227. That is what you mean? A. Yes.

XQ228. Now, in the Latham device do the teeth hold the film firmly and move it regularly, evenly and very rapidly? A. They do.

XQ229. Does the Green and Evans show an intermittent sprocket? A. I should not so consider it.

XQ230. Why not? A. Because in the description of that patent, I do not understand that the intermittently operating wheel has sprocket teeth designed to co-act with holes in a film.

XQ231. Well, does it have teeth? A. I understand that it has projections or teeth intended to bite into or against the surface of the film. That might be covered by a structure like a knurled

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structure. I do not understand that to be intended as a description of sprocket teeth, because I understand by sprocket teeth, teeth that are intended to co-act and co-operate with holes or links.

XQ232. Well, does the intermittent of the Green and Evans patent have projections with points? A. I understand that it does.

XQ233. And do you understand that that sprocket and those points or projections are of metal? A. I do.

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XQ234. Would those sharpened projections make holes in paper if the paper were drawn through as shown in that machine, that is, the Greene & Evans machine? A. Well, now, that would depend absolutely upon the structure of the particular device. If the points were sharp enough and long enough and if the tension was properly adjusted to accomplish that result, and the paper was the right quality, and all those things worked together, it might make holes in the paper. If any of them were a little different, it might not make holes in the paper. It might make small indentations; and finally, it might not make indentations, it might make a mark.

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XQ235. Well, if the sprocket and the paper were as shown in the diagrammatic representation of the Greene & Evans patent, Defendant's Exhibit No. 13, would those projections on the sprocket make holes in the paper, assuming the paper to be in place of the film? A. I do not consider that diagram a representation of anything that is shown in the Greene & Evans patent. For example, the teeth are shown projecting way through a line which is supposed to indicate paper film, or something like that, long before it comes in contact with the roller which it is supposed to be pressed by,

and the only pressure that could force a hole through there would be by having an enormous tension on that strip, and it has to cover five teeth before it comes in contact with the pressure roller. There is no indication of anything of that sort in the Greene and Evans patent. Such a strain could not perforate film. We found it necessary in a perforating machine, in perforating film, to have not a point merely, but a very sharp, keen cutting punch and die.

XQ236. I am asking you on this assumption that the strip, however, is paper, and not film. A. Well, to make a device as shown in that diagram that would perforate paper in advance of the pressure co-acting rolls, as indicated there, and make clean cut holes through it so that the whole body of the tooth came through, I think would be a very difficult matter. It would be hard to find a quality of paper so that it would not at least ride up part way on the teeth.

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XQ237. Has the Armat patent, No. 673,992, continuous sprocket teeth? A. It has.

XQ238. As I understand you, the difference that you found between the Armat patent and the Latham patent in suit is that in the Armat patent there is no intermittent sprocket or its equivalent. Is that your contention? A. Well, of course, the action of the intermittent feed in the Armat patent is really substantially different from the action of the intermittent feed in the Latham patent. The intermittent feed in the Armat patent is obtained by means of the co-operation of that lower—or as it is marked on that diagram (Defendants' Exhibit 32) upper—continuously running feed roller and that eccentric roller. It is obvious that the eccentric roller would not do any-

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thing at all without co-operation of that feed roller. Now, that feed roller is also the feed roller that delivers film to the take-up reel. The structures are not different, as they are in the Latham structure. In the Latham structure we have an independent delivery feed to the take-up reel which is entirely independent of the intermittent motion which would go right on working if you took the intermittent motion away. And so in the Latham the intermittent motion would go right on working if you took away that continuous delivery roller; and that is not true of the Armat structure. It is a kind of composite thing, I imagine, he has got there.

XQ239. Do you remember that in the suit of your company against the Independent Moving Picture Company, Mr. Frank N. Waterman testified as an expert for the Motion Picture Patents Company? A. I think he did.

XQ240. Do you know Mr. Waterman? A. Well, I have met him.

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XQ241. He has testified in a number of suits as expert for your company, has he not? A. Yes, I think he has.

XQ242. And he is a well known and highly regarded expert in this city, is he not? A. Yes, sir, I believe he is.

XQ243. Do you remember his testimony in that suit against the Independent Moving Picture Company? A. Well, I don't remember it offhand. I might remember some parts of it.

XQ244. Do you remember that Mr. Waterman was asked the following question in that case: "What patentees were you referring to when in your direct-examination you said that 'it appears from the issue date of his (Latham) invention,

all of the patentees of machines which can lay any claim to practical and commercial utility embodied his improvements in the machines shown in their patents," and that later he was asked: "Please take the trouble to ascertain who you were referring to by your reference to all of the patentees showing practical and commercial structures?" And in answer to that question he said, "So far as I am able to say at present I presume that I had reference to Joly patent 569,875, the Armat patent 673,992; I did not notice any others." 1130
Do you remember that he so testified? A. I think he did.

XQ245. Do you remember that you testified in the Casler-Latham-Armat Interference? A. I believe I did.

XQ246. Do you remember testifying there with reference to the Casler camera as follows: "The film is moved rapidly with an intermittent motion, it is held taut at the point of exposure, and slack film is provided between the first feeding device and the tension device, so that the film may be intermittently started and moved with great rapidity without undue strain or wear upon the film." A. Yes. 1131

XQ247. This seventh claim upon which your company is now suing in this case was not in suit in the former case against the Independent Company, was it? A. I don't think it was.

XQ248. And this claim is confined to the teeth of the intermittent and of the continuous feed, is it not, with the other mechanisms stated in the claim, of course? A. Well, I know that the teeth are essential elements of the feeding device of this claim, but there is a lot to it besides teeth.

XQ249. Oh, yes, of course; but this claim differs from the other claims, does it not?

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Mr. Church: Now,—

Mr. Jeffery: I will withdraw that. I wanted to bring his attention to another matter.

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XQ250. Exactly what advantage, briefly stated, do you contend is present in having teeth both on the intermittent and on the continuous feed sprockets? A. Well, the teeth on those sprockets are part of the means for accomplishing the results that I understand that Latham was trying to accomplish, and they enabled him to maintain a constant and regular quantity of slack film for the intermittent operation and handling of his intermittent feeding device, and on the intermittent feeding device that enabled him to feed the film forward picture by picture, as determined by the perforations in the film, independent of any variation in the length of the film and it seems the teeth were effective means for carrying out the purposes he apparently had in mind, when co-operating, of course, with properly perforated film.

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XQ251. Are there machines in the prior art, on which the claim of the Armat patent, No. 673,992, will read?

Mr. Church: Objected to as not proper cross-examination.

Mr. Jeffery: I will withdraw the question. If the phraseology is what you object to, I will put it in another form.

XQ252. Are there motion picture machines, or have there been such machines in use, which embodied the structure shown in the Armat patent, No. 673,992? A. There have been motion picture cameras in use involving the construction. I do

not recollect ever to have seen a motion picture projecting machine in use involving that construction. There may have been such.

XQ253. What is the function of the intermittent sprocket of a motion picture projecting machine? A. Well, the function of the intermittent sprocket of a motion picture projecting machine is to move the film intermittently.

XQ254. Now, do you remember the brief which was filed, and the argument which was made, on behalf of the Motion Picture Patents Company in the suit against the Independent Moving Picture Company, in the United States Circuit Court of Appeals of this Circuit? A. I suppose I read it once, but it was a long while ago. I don't remember much of it.

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XQ255. Do you remember that it contained this statement: "The first commercial use of the invention by Latham followed immediately after its completion in the early part of 1895, was in connection with a camera, although he subsequently used it in projecting machines. It was shortly afterwards invented independently in France by M. J. H. Joly, who used it both in cameras and projectors, and still later, in the year 1895, in this country, by Thomas Armat, who used it exclusively in projecting machines"? A. Well, I don't actually remember it, but I presume that it did. I am willing to admit that it did.

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XQ256. That was the position taken in that case on behalf of your company, was it not?

Mr. Church: I object to that as calling for opinion, and not evidence, and as misleading; the issues in the former case were quite different than the issues here.

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A. I don't think I am qualified to state exactly what opinion or what position our attorneys took in reference to all matters in that case.

XQ257. But you remember this statement was in the brief? A. I don't exactly remember it, but I will admit that it was in there.

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Mr. Scull: In pursuance of the stipulation dated July 16, 1915, the complainant now offers the testimony of the witnesses named in the index of the exhibit book, "Complainant's Stipulated Depositions and Exhibits," and the exhibits referred to in said depositions are now offered on behalf of the complainant, as follows:

Lauste Deposition in Armat Interference.
Marked Complainant's Exhibit L.

Mr. Jeffery: I object to it as incompetent, irrelevant and immaterial.

Mr. Scull: We offer Woodville Latham's Deposition in the Armat Interference.

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Mr. Jeffery: Objected to as incompetent, irrelevant and immaterial, and on the ground that these depositions have no competency whatever in this suit.

Marked Complainant's Exhibit M.

Mr. Scull: Colt's Bills and Letters.

Marked Complainant's Exhibit N.

Mr. Scull: Clipping from "Chicago Inter-Ocean."

Marked Complainant's Exhibit O.

Mr. Scull: Eastman Kodak bill of February 18, 1895.

Marked Complainant's Exhibit P.

Mr. Scull: Eastman Kodak Company bill of April 5, 1895.

Marked Complainant's Exhibit Q.

Mr. Scull: Eastman Kodak Company bill of April 27, 1895.

Marked Complainant's Exhibit R.

Mr. Scull: Eastman Letter.

Marked Complainant's Exhibit S.

Mr. Scull: Decision of Examiner of Interference in the Armat Interference.

Marked Complainant's Exhibit T.

Mr. Scull: Certified copies Latham Drawings.

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Marked Complainant's Exhibit U.

Mr. Scull: Lauste Sketch.

Marked Complainant's Exhibit V.

Mr. Scull: Film of Griff & Barnett Fight.

Marked Complainant's Exhibit W.

Mr. Scull: Otway Latham's Note of Experiment.

Marked Complainant's Exhibit X.

Mr. Scull: Clipping from "Sunday Mercury," May 5, 1895.

Marked Complainant's Exhibit Y.

Mr. Scull: Clipping from "New York Sun," April 22, 1895.

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Marked Complainant's Exhibit Z.

Mr. Scull: Latham Exhibit No. 7, Armat Interference.

Marked Complainant's Exhibit AA.

Mr. Scull: Latham British patent (Johnson), 1896.

Marked Complainant's Exhibit BB.

Mr. Scull: Lauste Photograph.

Marked Complainant's Exhibit CC.

Mr. Jeffery: With permission of the plaintiff's counsel, I will now offer in evi-

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dence an exhibit which I have omitted to offer, pursuant to the stipulation of July 16, 1915, being a photograph of the feeding mechanism of the Atlanta machine.

Marked Defendants' Exhibit 50.

THOMAS ARMAT, a witness called on behalf of the complainant, being duly sworn, testifies as follows:

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Direct Examination by Mr. Church:

Q1. State your name, age, residence and occupation? A. Thomas Armat; 49; residence, Washington, D. C.; occupation, moving picture business and others.

Q2. Are you the Thomas Armat who was a party to the Interference, No. 18,461, in the Patent Office, between the applications of Armat, Latham and Casler? A. I am.

Q3. It appears that during the giving of testimony for Mr. Latham a certain piece of apparatus was introduced in evidence which was identified as Latham Exhibit No. 12. Did you examine that exhibit with sufficient care to enable you to state now what it was or purported to be and what was its general construction? A. I examined the apparatus very carefully at the time it was put in evidence and I remember it quite distinctly. The apparatus was designed to be and was a camera for taking moving pictures. It was not provided with any lens or lenses at the time I saw it nor was it enclosed in the light-tight box that is a part of a camera. It contained, however, all the neces-

sary mechanism for intermittently moving a film, and combined in a general way all the elements illustrated in the Latham patent in suit. I went over the machine carefully to find, if possible, any defects of construction or lack of operativeness in the machine, but I was unable to discover any; on the contrary, I was struck with its mechanical perfection. The machine consisted of a means for supporting a reel of film before and after exposure, of a sprocket drum which was given an intermittent rotary motion, the teeth of the drum being designed to fit into the perforations of the film, the means for giving the drum its intermittent motion consisting of what is known as a "Geneva stop" and accurately illustrated at Fig. 5 of the Latham patent. The machine was provided with a continually revolving sprocket drum intended to draw the film from the supply reel and supply it in the form of a slack loop ahead of the exposure window so that it might be drawn down by intermittent motion by the action of the Geneva stop and its drum. The machine was also provided with another continuously rotating sprocket drum on the opposite side of the exposure window which was designed to maintain the slack or loop between the intermittently operating drum and the take-up reel. The apparatus I saw is very well illustrated, diagrammatically, at Fig. 6 in the Latham patent in suit. The difference being that in the camera I saw, the film was fed downward while in the apparatus illustrated in the patent the film is fed upward. There was no other substantial difference between the feed mechanism of the camera I saw and the feed mechanism illustrated in the patent.

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*Thomas Armat.***Cross Examination by Mr. Jeffery:**

XQ4. Mr. Armat, do you remember that in the decision of the Examiner of Interference, in the Interference to which you were a party, with Mr. Latham and Mr. Casler, it was held as follows, with respect to Exhibit No. 12: "It is apparent from the testimony that the exhibit machine was designed and made primarily for the purpose of taking pictures and not for projecting pictures on a screen."

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Mr. Church: I object, the decision being the best evidence of its contents.

A. I recollect that that was the expression used in that decision.

XQ5. Do you remember that in that same decision it was also held as follows: "The machine as it stands to-day is not in condition for exhibiting pictures, but is arranged to be used as a camera, which is the use to which it has been put almost entirely. It now contains a circularly revolving shutter with but two small peripheral apertures, which renders it impossible to make the interval of pause and illumination exceed the interval of motion of the film?" A. Yes, I remember that that expression was also used, and that the statement was also made in the decision.

XQ6. Do you remember that you testified as a witness for the Motion Picture Patents Company in the suit brought by it against the Independent Moving Picture Company of America? A. I do.

XQ7. In a suit on this same Latham patent? A. I do.

XQ8. Do you remember that you testified that you met Mr. Gray Latham, who saw one or more of

your exhibitions with your machine at the Atlanta Exposition? A. I do.

XQ9. Do you remember testifying that you saw Mr. Gray Latham looking at the machine through circular openings in the little camera through which the pictures were projected, standing at that time in such a position that he could see the machine as it was being operated? A. I do.

XQ10. Do you remember testifying that Mr. Gray Latham was also present at the first night's exhibition of the machine called the Edison Vitascopic, at Koster & Bial's Theatre in New York? A. I do.

XQ11. That is, the exhibition of your machine which was made at the Atlanta Exposition in the fall of 1895, is it not? A. You mean that that—

XQ12. At the time that Mr. Gray Latham was present? A. Yes.

XQ13. Do you remember also testifying with respect to moving picture projecting machines as follows, in that same case: "If the machine be constructed and designed to feed the film 'so that the film may be intermittently moved with great rapidity without unnecessary strain or wear upon the film,' it would, in my opinion, be an embodiment of the Latham feeding mechanism?" A. I presume I so testified.

XQ14. I will let you read this printed record; if you want to (handing record)? A. I do remember.

XQ15. You have been engaged ever since 1895, and were engaged previously to that, in the building and designing of motion picture machines; were you not? A. I have been, yes.

XQ16. And you testified as a witness in this Interference proceeding, I suppose? A. I did.

XQ17. In fact, you acted as your own attorney at

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one stage of those proceedings, did you not? A. I did.

XQ18. And you became very familiar with the devices that were introduced as exhibits in that proceeding, and with all the developments of the machines made by yourself and Casler and Latham, involved in that proceeding, did you not? A. Yes, I became quite familiar with them all.

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XQ19. Do you remember that you were asked the following questions and gave the following answers in the suit of the Motion Picture Patents Company against the Independent Moving Picture Company: "Q. So far as machines of the continuously moving film style are concerned, it would be your opinion, would it not, that in February, 1895, it was a mere matter of choice as distinguished from originality whether a sprocket feed or a friction feed were employed? A. As I understand your question, and if you are not concerned as to the results obtained, it was a matter of choice as stated in your question.

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Q. And, in your opinion, is, or is it not, the fact that at that date it was for camera constructors a mere matter of choice, as distinguished from originality, whether they would adopt a friction feed or a sprocket feed for their camera? A. To a limited few who had knowledge of the Edison method of taking pictures it was a matter of choice between two methods * * *. Q. That is not what I asked you. I understand that both continuously moving film projectors and intermittently moving film projectors had at least been suggested prior to that date and that in your opinion no projector of either type had been at all successful before that time." (That time, as I understand, being February, 1895). "In view, however, of prior suggested devices, what I want to

know is whether you think it would involve any originality merely to suggest an intermittent type of projector employing a sprocket or sprockets?

A. As I understand your question it would not."

A. I do.

HERMAN CASLER, a witness called on behalf of the complainant, in rebuttal, being duly sworn, testifies as follows:

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Direct Examination by Mr. Church:

Q1. Please state your name, age, residence and occupation? A. Name, Herman Casler; age, 48; occupation, manufacturer of machinery.

Q2. You were requested, were you not, to visit the factory and works of the Anseco Company at Binghamton, N. Y., that company being the successor of the Anthony & Scovill Company, for the purpose of searching for missing exhibits introduced in the Patent Office Interferences proceedings, known as the Latham-Armat-Casler Interference, known as No. 18,461, and particularly for an exhibit known as Exhibit No. 12, offered on behalf of Latham in that Interference, being a motion picture camera? A. I was.

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Q3. Please state the result of your investigation, who directed you to make it, where you got authority to make it, and if you did? A. I made this search on December 2, 1915, and was directed to do so by Mr. H. N. Marvin, and was given assistance in the work of the Anseco Company by Mr. Toplift, who is president or secretary of the company, I do not know which. Mr. Toplift piloted me to the various

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buildings, and I made a thorough search for the model of a Latham camera, but was unable to find any trace of it.

Q4. State how extensive your search was? A. Well, I searched from about nine in the morning until five or half-past five in the afternoon, about three-quarters of an hour for lunch, and I covered about fourteen buildings, from cellar to garret and attic.

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Q5. Give us some idea of what you did in your searching. You did not just walk through the buildings, I take it? A. I passed through the different buildings and the rooms in the buildings, and made a careful search of all nooks and corners where such a device might be stowed away and forgotten, and in making a search through their storehouse I was given permission to open any cases that I wished to open, and did open about eight or ten cases, which I found contained old records and relics from the offices of the Anthony & Scovill Company, but in no case did I find any models of machinery. The search was very thorough and I believe covered the grounds thoroughly.

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Q6. Did Mr. Toplift know for what you were in quest? A. He did.

Q7. Did anyone assist you in the search? A. No one except Mr. Toplift, who accompanied me through the buildings; and in the warehouse they gave me an assistant to open the cases.

Q8. Did you report the result of your search? A. I did.

Q9. To whom? A. To Mr. Marvin.

Cross Examination by Mr. Jeffery:

XQ10. Mr. Casler, you are the Herman Casler who was a party to the Interference known as

Latham-Armat-Casler Interference, No. 18,461?
A. Yes.

XQ11. Do you remember that in that proceeding there was introduced in evidence on your behalf testimony or evidence to show that one Eugene Lauste was the real inventor of the Latham machine, Exhibit No. 12, in that Interference?

Mr. Church: I object to that as not proper cross-examination.

A. I don't have any recollection of that evidence. XQ12. You do not remember anything about that? A. No.

XQ13. Do you remember whether or not at that time you believed that Lauste was the original inventor of that machine? A. I don't know as I formed any such opinion.

It is stipulated by counsel, and with the authority of the Court, that all physical and bulky exhibits are to be retained in the custody of the respective counsel who have offered them in evidence. Documentary exhibits are to be left with the Clerk. 1167

It is stipulated and agreed that the complainant may withdraw the originals of Complainant's Exhibits B and C, the same being the original assignments from the Anthony & Scovill Company and from the E. & H. T. Anthony Company, respectively, and substitute typewritten copies therefor.

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Eugene Lauste.

CIRCUIT COURT OF THE UNITED STATES
FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURES PATENT COM-
PANY,

Complainant,

vs.

In Equity
No. 5-167,

1169 INDEPENDENT MOVING PICTURE
COMPANY OF AMERICA,
Defendant.

Proofs for final hearing in rebuttal on behalf of the complainant, taken before Benjamin Barker, Esq., an Examiner of this Court in accordance with the 67th Rule of the Supreme Court as amended, at Room 132 of the Hotel Brevoort, Fifth Avenue and Eighth Street, New York City, on April 6th, 1911, at 11 a. m.

1170 Present—PARKER W. PAGE, Esq., Counsel for Complainant;
Messrs. KENYON & KENYON (Mr. A. D. Kenyon) for Defendant.

EUGENE LAUSTE, a witness called on behalf of the complainant, having been first duly sworn, deposes as follows:

Mr. Kenyon: I have no objection to the testimony being taken stenographically, provided a copy of the direct is gotten out at once, and if I find it necessary, that it be

gotten out before the beginning of the cross-examination, and certainly before the close. I also wish to state that while the notice of taking this testimony has been very short, and that Mr. Eyre, who has had charge of the case heretofore for the defendant, is out West taking testimony in another case and cannot be here this week, we will nevertheless proceed and will do all we can to expedite the taking of the witness's testimony; but if it should become necessary before closing the cross-examination to have Mr. Eyre present we will insist in that case upon an adjournment until next week.

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By Mr. Page:

Q1. Where is your home and residence?

A. In London, England.

Q2. What is your age?

A. 54.

Q3. What is your occupation?

A. Experimental work.

Q4. Are you a skilled mechanic?

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A. I think so.

Q5. Have you lived in this country for any length of time?

A. Yes, from 1886 to 1897.

Q6. Since 1897 where have you lived?

A. I have lived in Paris and London.

Q7. How long have you been in this country on the present trip?

A. From Monday.

Q8. Did you ever know or do any work for a gentleman by the name of Woodville Latham?

A. Yes.

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Q9. Were you ever employed by Mr. Latham?

A. I was employed by him, yes.

Q10. When did you enter his employ?

A. In 1894 (witness refers to paper which he hands to complainant's counsel).

Q11. You have handed me a telegram dated November 21, 1894. What is that?

A. Asking about what kind of tools I needed to stock the shop with.

Q12. Can you tell what part of the year 1894 it was that you went to work for Mr. Latham?

1175 A. We started a very short time after that; that was in November; I think it was in the week after that.

Q13. To do what work were you employed by Mr. Latham?

A. Mr. Latham called me to his hotel, the Bartholdi and explained to me what he wanted for a new machine, for motion pictures; he asked me if I understand enough about machinery to do the work, and he explained to me what he wanted; I said yes; "Well," he said, "the first thing to do is to make a machine for experiment with the kinetoscope film, and see if you can't project that." That is what I did; I start the first machine in that, and

1176 one night I went with Mr. Otway Latham in Broadway in some place and saw some show, some kinetoscope show, and he gave me a piece of film from one of those machines; that was the one I used for experiment. After that we saw the thing was possible, and I start another machine with a larger film, to carry a larger film; but of course all the drawings I made were very rough drawings; and I showed them to Mr. Latham, to see does that suit him, before I started the machine; because Mr. Latham was not a mechanic and depend on me to

do the work; and all what I do he approved all that, O. K. That was the first thing of course; after that we start a camera for taking pictures for I submit him the drawings too; but every one was very rough drawings; and after seeing the drawings he says "Go ahead," and I do the work; I do all the camera.

Q14. Why did you start to build this camera?

A. I started in December.

Q15. I say why did you start to build this camera?

A. For taking pictures.

Q16. Did you not have pictures, or could you not obtain pictures from other sources?

A. No, because Mr. Latham's idea was to get a larger film, a little bit wider; Edison too narrow.

Q17. When did you begin work on this camera?

A. In December.

Q18. In what year?

A. 1894.

Q19. Do you know when that camera was completed?

A. In the end of January, very near; something like that; I can't remember exactly; I remember we take a picture of an incandescent lamp in February about the 26th; but when the camera is finished you have to wait for the film because Mr. Latham gave the order in February, but between the camera's finishing and the taking pictures I had to make a punching machine for perforating the film; as soon as we received the film we punched the holes and we tried it in February. I think the 26th, or something like that; I can't remember exactly.

Mr. Kenyon: Objection is made to this entire line of examination on the ground that it appears to be new matter, and not

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Eugene Lauste.

proper rebuttal testimony; and notice is given that at the proper time motion will be made for leave to take testimony in reply to this line and similar lines if persisted in.

Q20. Do you remember any of the incidents connected with the trying of this camera for photographing an incandescent light and if so will you tell what you remember about it?

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Mr. Kenyon : The same objections once for all to this and similar lines.

A. We find some trouble with the stop motion; and we have to make another one, something similar to the Maltese cross; and when the camera was in good order again we took a picture on the roof, a short time after that, of Mr. Latham, Mr. Gray Latham, Mr. Kleinert and myself and my son; and Mr. Otway Latham operated the camera; at that time the camera worked in good order.

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Mr. Kenyon : The last part of the answer objected to as a matter of conclusion, and incompetent.

Q21. I referred in my question to the time when you photographed the incandescent lamp; where this was done?

Mr. Kenyon : Objected to as leading and assuming facts not proven.

A. It must have been in March.

Q22. No; where; where was this done?

A. In Franklin Street on the roof, the Scott Building.

Q23. Who was present at the time that you photographed the incandescent lamp?

A. Mr. Otway Latham, Mr. Dixon, Mr. Kleinert and myself.

Q24. What time of day or night was it?

A. It was near 12 o'clock at night.

Q25. How long before this incandescent lamp was photographed was the camera in working order?

A. It was a month after; after we tried the lamp; it worked all right and we took that picture on the roof.

Q26. Do you mean that the picture on the roof was taken a month after the incandescent lamp was photographed?

A. Yes, about a month.

Q27. How far was the taking machine or camera completed at the time when you used it to photograph the incandescent lamp?

A. Oh, about a week after, I think.

Q28. I meant to ask you how near completion or working order was the camera?

A. That is what I said; a week after; that is what I said before; it worked in good order.

Q29. But if you photographed the incandescent lamp with the camera on February 26th it must have been in working condition at that time?

Mr. Kenyon: Objected to as grossly leading and as assuming a condition of facts not proved, and as incompetent and a conclusion of law.

A. Yes.

Q30. How long had it been in that shape before you took the picture of the incandescent lamp?

Objected to as leading.

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A. How long it had been in that shape before—I don't understand clearly that question. You mean if the camera worked in good order before taking the lamp? Is that what you mean?

Q31. No; I mean how long before you took the picture of the lamp was the camera in the same condition as it was when you photographed the lamp?

A. Oh, about the last of January.

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Q32. If the camera was in that condition the last of January why did you not use it sooner?

Objected to as incompetent.

A. Because we have no film and the punching machine is not made yet.

Q33. Do you remember when you got the first film?

A. That was in February; I don't know the date.

Q34. Do you know where the film came from that you used?

A. Eastman Kodak.

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Q35. When that film was obtained what did you do with it?

A. We punched the holes with that new machine, with the new punching machine.

Q36. When was the punching machine made?

A. Well, I started as soon as the camera is finished; I suppose in February; it took me about a fortnight to do it.

Q37. Do you know what has become of the taking machine which you had at that time?

A. No, I don't know.

Q38. Have you ever seen it since?

A. Never; I start to do new ones after that; the same principle, but much stronger; I made that specially to take pictures in Mexico.

Q39. Now, this taking machine with which you photographed the incandescent lamp in February, 1895, can you tell us how it was made, and how it operated?

A. Well, of course I forgot a little bit now, but I remember very near; I know I used a sprocket wheel to feed the film with the stop machine, Maltese cross stop machine, and some kind of adjustment for the Maltese cross to keep the picture from jarring, to keep the film—it locks when the film will stop; you must have some adjustment, don't get any play between the two wheels.

Q40. How was the film fed through the taking machine?

A. By a sprocket wheel, a continuous sprocket wheel; and between the two sprockets a loop; one sprocket feeds all the time and another one stops it; intermittent sprocket, and the same thing on the bottom.

Q41. Was this device used for any purpose except taking pictures?

A. Oh, well, we used it for projecting too, but the machine was not meant for that.

Q42. Did you make any machines for projecting? 1191

Same objection to this entire line of examination.

A. Yes, I make one up continuous feed, a larger shutter and a very small opening; the same principle as the kinetoscope.

Q43. What did you make for Mr. Latham in the way of machines for either taking or projecting pictures after the pictures were taken of the swinging incandescent lamp, and the pictures were taken on the roof, of you and your son and others; what machines did you make after that?

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Eugene Lauste.

Objected to as calling for a conclusion and as involving facts not proven and incompetent.

A. Well, of course I made the printing machine to make a positive.

Q44. Did you make any other machines for either taking or projecting pictures?

A. We start five machines for projecting, and the first one finished we put on exhibition in Broadway.

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Q45. Do you know how many of them were finished?

A. Oh, we finished all five after.

Q46. I wish you would look at the drawings which I hand you and tell me what they illustrate or represent?

Objected to as it is shown that the witness is competent to testify.

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A. This is a new machine projecting with continuous feeding (witness points to figure 1); and the next one is the copy of the camera, the same thing with stop machine; but made different for projecting.

Q47. Do you know from what these drawings were made?

A. Well, we have a workman at that time, Mr. Weit; he started drawing that machine, and when he do that machine I made the two new cameras; he take my advice with Mr. Latham for the shape of the machine, the mechanical part and everything; and some time after that Mr. Latham bring a draftsman to make the drawing for the patent.

Q48. Do you remember this draftsman's name?

A. I know he speaks French.

Q49. Was this drawing made from any machine which you had at the time?

Objected to as leading.

A. Well, from the part of the machine; the machine was not put all together; Mr. Weit and me showed all the parts of the machine to the draftsman, and explained to him all the mechanism.

Q50. You have said something about the mechanism shown in this drawing being the same as the camera?

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A. Yes.

Q51. Will you explain more fully what you mean by that?

A. Well, because we use on that machine the Maltese cross to give a stop motion on the film exposed to the light; that is the only way to get more light on the screen; but the whole part of the machine was similar—well, exactly the same as the camera.

Q52. You mean that the parts of the machine shown in these drawings were the same as the corresponding parts of the camera?

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A. Yes; the whole parts from here to here (indicating) is exactly the same; you see that is a feed roller (pointing to roller 46 in Figure 2); and this one is the stop motion (pointing to 50 in Figure 2); this one is continuous (pointing to roller 46); run by beveled gear (44) and 39 continuous too. Sprocket No. 50 is intermittent; now the shutter is on the front—a very small shutter on the front of the machine with the bellows to get the focus; on top of the camera we have two larger boxes to carry the film, one on top and one on the bottom; that is the only differences.

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Eugene Lauste.

Counsel for Complainant offers in evidence the drawings referred to by the witness in the last question and the same are marked Complainant's Exhibit certified copies Latham drawings.

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Q53. Now will you please tell us again, and give your answer carefully and slowly so that it can be all taken down, just what differences, if any, there were between the feed mechanism of the projecting machine shown in these Latham drawings in Figures 2, 3, 4 to 8, and the feed mechanism which you say you employed in the taking machine that was used for photographing the incandescent lamp on February 26th, 1895?

A. There is none different; only the shape of the machine.

Q54. Did you come to this country once before to testify about your work on this machine?

A. Yes.

Q55. Do you remember when that was?

A. In 1890, I think; yes, 1890; oh, I can tell you exactly (referring to paper) in 1899—no, in 1898.

Q56. Did you mean to say 1890 or 1898?

A. 1898.

Q57. Did you say 1890?

A. No, I didn't say that; I said 1898; and after I said 1899; that was impossible, the camera wasn't made at that time, in 1890.

Q58. Have you read over recently the testimony which you gave about this machine in 1898?

Objected to as new matter.

A. Yes.

Complainant's Counsel offers in evidence a certified copy of deposition of Eugene Lauste in the Interference Latham vs. Casler vs. Armat and it is marked "Complainant's Exhibit Lauste deposition in Latham Casler Armat Interference."

Objected to as immaterial, irrelevant, incompetent, and as new matter.

Q59. Did you ever testify more than once before about this machine?

A. No, only once.

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Q60. In that same proceeding a Mr. Netter testified that in May, 1895, he saw in your shop a partially completed machine like that illustrated in the Latham drawings which you have just examined. Was there any such machine in your shop at that time that Netter could have seen?

A. Yes, but I don't think that there was one finished; I don't remember.

Q61. What machine was that?

A. Well, that is this one, with the continuous motion; this one; continuous feeding (indicating Figure 1).

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Q62. Did you have any contract or agreement with Mr. Latham about your work?

Objected to as calling for a conclusion.

A. I had no contract with Mr. Latham, but he give me wages to work for him and promise me some share in the company if I succeed, because he is not a mechanic, and he wanted somebody to help him on his invention. And that was what I do; I know all the mechanical part, and the rough sketch and drawings and show it to him before starting anything.

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Eugene Lauste.

Q63. Did Mr. Latham ever give you any shares of stock?

A. Yes, he give me shares, 200 shares; that is what he give me (handing paper to Counsel); that share he give to me after the pictures taken on the roof on Frankfort Street.

Witness produces a stock certificate which is handed to Counsel for Defendant for examination, for the purpose of cross examination; but it is not offered in evidence.

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Q64. Have you seen Mr. Woodville Latham since you worked for him in 1895?

A. The last time I saw him was—the last time I saw him was when I go to that testimony; he was present when I make my testimony; he was present then; and Mr. Gray Latham was present with his father.

Adjourned till to-morrow, April 7, 1911, at 10 A. M.

New York, April 7, 1911.

1206

Met pursuant to adjournment; parties present as before.

Direct-examination of EUGENE LAUSTE con tinued by Mr. Page:

Q65. I find in reading over the record that in answer to "Q19" you state when asked when the first camera was completed, "In the end of January, very near, something like that." In what year was that?

A. In 1895.

Q66. In reading over your questions and answers

22 to 32, there seems to be some misunderstanding either on your part or my own, and to clear it up I will ask you to tell us just what you now remember about the first trial or use of the taking machine, which you say was completed sometime in the latter part of January, 1895, when you and the others tried that machine at night in the Frankfort Street shop?

A. We experiment taking a photograph of the incandescent lamp with success; but the next day after we tried again with Mr. Otway; but Mr. Dickson the first night tried by hand and a day or two after we tried the camera with Mr. Otway, and we put a motor on it; and of course the speed was so high we broke a tooth of the stop machine; we had another made at once and replaced this one and the camera ran right again. Yesterday, as I say, we took a picture of Mr. Latham, myself, Mr. Kleinert and Mr. Gray Latham—I think I said a month after; I don't know, I forgot that. But that picture we took very shortly after the camera was fixed again. This one I mean a month after was another between two Frenchmen fighting; that is the one I mean that we took the month after.

Q67. Was this incandescent lamp which you photographed in the shop standing still?

A. No, swinging; it is so long time ago that I must say it is hard to remember.

Cross-examination by Counsel for Defendant:

XQ68. You say that Mr. Latham called you to his hotel, the Bartholdi, and explained to you what he wanted for a new machine about motion pictures; he explained to you what he wanted; when did that interview take place?

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A. I think it was in October; something like that.

XQ69. What year?

A. 1894.

XQ70. In his room in the hotel?

A. In his room in the hotel.

XQ71. Who else was present?

A. Let me see; I think Mr. Otway Latham was there; yes, Mr. Otway.

XQ72. Are you sure of that?

1211 A. Well, I can't say sure; but I think so; there was somebody with him; I think it was his son, Mr. Otway.

XQ73. How long did this talk last?

A. Oh, about an hour.

XQ74. And after that you went to work for him and made the machines that you have described?

1212 A. That is right; but before that we went with Mr. Otway to find a place for a shop, and I don't know where we find a place; I don't know a place; because we had no money and we had to wait a month for it, and after that I got that telegram I showed you yesterday calling me again to his office; to his room; and he said, "Now I have got the money and we will start at once;" and I go out again with Mr. Otway and that is when we found a place in Frankfort Street.

XQ75. And then you went to work and made the machine you have described, and did all the work yourself?

A. Yes.

XQ76. You made all these rough drawings and sketches?

A. Yes, sketches.

XQ77. Did Mr. Latham make any sketches or drawings?

A. No; he don't make any; I make all the sketches myself, and I submit it to him.

XQ78. And when you submitted it to him what did he say?

A. Well, he said "I think it will be all right, because I am not a mechanic, and I depend on you for the success of the machines."

XQ79. At this time, when you had the talk with him at the Hotel Bartholdi what did he say to you; tell me what he said to you, as near as you can remember. If you don't remember his exact words tell as near as you can?

A. As near as possible yes; well he said he can't pay me very much; he would fix the price \$21 a week; but he promised me in case of success a share in the company; that is the only thing I remember.

XQ80. Did he say anything else?

A. Well, I forget now; it is too long ago.

XQ81. If he said anything else to you at that talk I want you to tell just what he said; all you can remember?

A. Well, I can't remember, only he says his son stay with me to see what I am doing in the shop.

XQ82. Anything else you remember?

A. I can't remember nothing else now.

XQ83. You said in your testimony yesterday that he explained to you what he wanted for a new machine for motion pictures?

A. Yes, of course.

XQ84. "And explained to me what he wanted." Now have you told me all that he said on that subject?

A. Well, he said he wanted a camera, a projecting machine, a punching machine and a printing machine; I have to design all the mechanical part and submit it to him, and see if I am right on it.

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XQ85. Did he say anything else on the subject that you remember?

A. No, I don't remember nothing else.

XQ86. What you have testified to is substantially a correct statement of what he said to you at this time, at this interview at the Hotel Bartholdi?

A. Yes, that is what he said; that is the only thing I remember now.

XQ87. Mr. Otway Latham he told you would work with you in the shop?

A. Yes.

XQ88. Did he work with you?

A. Oh no, not do any work; he is not a mechanic you know; he watched me all the time, what I am doing because he was very interested in my work.

XQ89. Did you have any one else in the shop to help you?

A. Yes, sometime after we start, Mr. Kleinert.

XQ90. Did he help you with these machines, the taking machine and the projecting machine?

A. Very little on the camera, but more on the projecting machine.

XQ91. And those were all the helpers, on the machines, you had?

A. Yes.

XQ92. What was the first machine you made after you started to work at the Frankfort shop?

A. The first machine I made was a projecting machine; it was just for experiment with the kinetoscope film.

XQ93. What do you mean by the kinetoscope film?

A. Because the idea of Mr. Latham was to get a film wider and before starting the machine we experiment with a film; what you call the Edison standard film; and after we proved the demonstra-

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tion I start at once another one with a larger sprocket.

XQ94. Did you finish the projecting machine?

A. No; not exactly, because at that time Mr. Kleinert came with us and told Mr. Latham it would take a long time to finish it; better we make something similar exactly to the kinetoscope, and I started a pattern and we made a machine about like the kinetoscope; but used for projecting instead of looking in through a peep-hole.

XQ95. You have used the word "projecting" in your testimony a number of times. What do you mean by the word "projecting" or "project"?

A. Well, to use like a magic lantern enlarging the picture on a screen.

XQ96. Is the kinetoscope a projecting machine?

A. No, it is not.

XQ97. What did you mean by a kinetoscope film?

A. Well, that is a film used on the kinetoscope; a narrow film.

XQ98. What did you mean by the Edison standard film?

A. Well, that is—I don't know—that is an expression for the film; pretty near adopted all over now.

XQ99. Whose film?

A. Edison's; four perforations on each picture.

XQ100. You are speaking of the film today, aren't you?

A. Well, the same as that before.

XQ101. What do you mean by that?

A. Well, because everybody adopted the Edison perforated now; and we do the same thing with that machine except a large film; but the same perforation.

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XQ102. What kind of film did you use in the experiments that you made at Frankfort Street with your taking machine and with the projecting machine?

A. The Eastman film; the Eastman Kodak film.

XQ103. Did you use any other than the Eastman film?

A. No, I don't think so; there was only Eastman made the films at that time.

XQ104. Where did you get the Eastman films from?

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A. From Rochester; Mr. Latham bought them himself.

XQ105. Are those the only films that you used at Frankfort Street?

A. With the camera, yes; but when we started experimenting with the Edison film we got that film from some exhibition in Broadway, through Mr. Latham at a place in Broadway where they exhibited, it was a kinetoscope show; and Mr. Otway took the film from one of those machines and give to me for experiment.

XQ106. When was that?

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A. That was in December, 1894, the beginning of December.

XQ107. Did any one else bring you any film while you were at Frankfort Street?

A. No.

XQ108. Did Mr. Dickson get any for you?

A. No, I never got any from Mr. Dickson.

XQ109. You are sure of that, are you?

A. Oh, I am sure.

XQ110. Mr. Page showed you a copy of the testimony that you say you gave in 1898, in the interference of Casler vs. Latham vs. Armat. I now hold it in my hand?

A. Yes.

XQ111. You gave that testimony at that time?

A. Yes, with some rectifications, because the name of Mr. Casler was never mentioned to me; I don't know what I come there for; testimony; but I don't know what kind of testimony.

Defendant's Counsel : The last part of the answer is objected to as volunteered.

XQ112. But you did testify?

A. I testified, yes; I mentioned in that about the sprocket; I always say roller; it is a mistake.

XQ113. How do you know there is a mistake in this testimony?

A. Because I read it all over.

XQ114. When did you read it?

A. Why, I read that Tuesday; last Tuesday.

XQ115. Was this testimony that you gave in 1898 true?

A. Yes, it was true, except that rectification that I say now about Mr. Casler; I never heard his name; and the sprocket instead of the roller.

XQ116. Otherwise it is true, is it?

A. It is true.

XQ117. I don't quite understand you when you say that you made a mistake in saying "roller" when you meant "sprocket" in this testimony; I would like to have you explain?

A. When I made the camera I said the camera was finished in January; the camera is perfectly in good order; but when we tried the film with the swinging lamp we don't use any box for carrying the film at that time, and the film is pulled straight and the sprocket is so small that we pulled only one hole each time, the film. Now when we

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Eugene Lauste.

took a picture of Griffon-Barnett we used a box at that time; one on top and one on the bottom; well, the sprocket film gave too much pull; it was too much weight to carry; we had some tearing on the film, and there was an objection that Mr. Dickson put another roller to get more teeth in the sprocket; that is what I say at that time.

XQ118. As I understand you Mr. Dickson suggested putting in an additional roller; is that it?

A. That is right, yes.

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XQ119. Can you tell or describe what roller there was in the camera?

A. Yes (witness asks for drawing and refers to Complainant's Exhibit Latham drawing). I think I have got about the same thing here; the film before goes straight like that (pointing from 24 in Fig. 6 down towards 58); and of course you get only one tooth. Now Mr. Dickson put another one on the camera, but not so far away; right here (pointing just about to the right hand upper corner of 46).

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XQ120. You mean an extra roller was put in the place between 46 and 56 as shown on this Fig. 6?

A. That is it, yes.

XQ121. What kind of a roller was it?

A. A rubber roller.

XQ122. A smooth surface.

A. A smooth surface, with two grooves in the rubber to let pass the teeth.

XQ123. What did that roller do?

A. It gave more grip on the sprocket; instead of one tooth you get four; we never tear the film after that.

XQ124. Before that you did tear the film, did you?

A. Yes, sometimes; of course not always.

XQ124½. This Figure 6 that you have just been looking at in Complainant's Exhibit Latham drawing, is that a drawing of a camera or projecting machine?

A. A projecting machine.

XQ125. When was the first taking machine or camera completed; I mean the first one you made at Frankfort Street?

A. In January, in the end of January, 1895.

XQ126. When was the first projecting machine completed?

A. The first one was completed—let's see; the first one I think was in May or June, 1895.

XQ127. How do you know that the first camera was completed in the latter part of January, 1895?

A. Because I remember exactly; when the camera was finished I have to make a punching machine and Mr. Latham ordered films from Eastman Kodak, and when the punching machine is finished I perforated some film and we take that picture of the lamp on the 26th of February.

XQ128. That is the only reason you know that you completed the camera in the latter part of January, 1895?

A. Yes, because to make a punching machine takes a long time.

XQ129. How do you know that you took the picture of the swinging incandescent lamp on February 26th, 1895?

A. From that testimony; from my first testimony (referring to Complainant's Exhibit Lauste deposition).

XQ130. That is the only thing that enables you to fix the date now as February 26th, 1895?

A. Yes.

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Eugene Lauste.

XQ131. It is so long ago that you have no independent recollection, aside from this testimony, that it was February 26th, 1895; is that right?

A. Yes.

XQ132. When you gave this testimony in 1898, how did you know that it was February 26th, 1895, when you took the picture of the swinging lamp?

A. Well, at that time I recollect better the date than now; it is too long time now.

XQ133. Is that all you can say on that point?

A. Yes.

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XQ134. Referring again to that first camera that you made, you say that later on Dickson suggested putting in this supplementary roller between 56 and 46 on Fig. 6?

A. Yes, that is right.

XQ135. Aside from that roller was there any other part of the camera that anybody suggested to you, or were they all your work?

A. No, not at all.

XQ136. You mean that all the rest of it was your work?

A. Yes.

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XQ137. You have spoken of a stop motion in this camera, and if I recollect rightly you spoke about some trouble with it. Did you have any trouble with the stop motion at any time?

A. Well, all I have is what I say; that the gear when it broke; that is the only trouble; that I have to make another gear and replace the broken one; but that don't change anything in the camera. It was just the same.

XQ138. Do you mean that there was no trouble at all with getting a stop motion after you went to work for Mr. Latham?

A. None at all.

XQ139. None at all?

A. No.

XQ140. Are you sure of that?

A. Perfectly sure.

XQ141. If in this deposition of yours, given in 1898, you had testified about trouble with the stop motion, what you said there would be true, would it not, rather than what you remember today?

A. I don't remember.

XQ142. Well, if you said in this testimony of yours that there was trouble with the stop motion, what you said about it was true?

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A. Certainly, of course.

XQ143. Your memory was fresher then than it is now?

A. Yes, it is easy to find out if you have the bill from Mr. Pearce; we ordered one pair of gear stop motion and a few days after we ordered the same one; or I mean another pair similar; there was one tooth broken.

XQ144. Don't you recall Mr. Dickson suggesting a stop motion at the very beginning of your work, or near it?

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A. Well, Mr. Latham spoke to me about something like that; he told me Mr. Dickson had got an idea, and we tried that idea, but that thing don't stand the speed; we gave her up.

XQ145. That is, Mr. Dickson's suggestion about the stop motion wasn't successful?

A. It was not successful.

XQ146. Whose suggestion was this about the stop motion; this stop motion that failed; who suggested it?

A. Oh, I did and Mr. Latham did; I tried it for him.

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Eugene Lauste.

XQ147. I am speaking now of a stop motion that you tried and didn't work?

A. That is it.

XQ148. Who suggested that stop motion?

A. Mr. Dickson; what Mr. Latham told me.

XQ149. You mean that Mr. Latham told you that it was Mr. Dickson's suggestion?

A. That is right.

XQ150. Was this stop motion of Mr. Dickson's the first stop motion you tried after you went to work for Mr. Latham at the Frankfort Street shop?

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A. Yes.

XQ151. How long were you at work over that stop motion of Dickson's?

A. Oh, a very short time.

XQ152. Then what stop motion was tried?

A. You mean after that?

XQ153. Yes; the next after that.

A. We find an idea on the catalogue of the Boston Gear Works; it is an internal gear; but the diameter was much too big for the camera, and we use that gear for the punching machine; and after that I designed a new Maiteese cross and Mr. Pearce make it under my instructions.

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XQ154. Did you send for one of these internal gears of the Boston Gear Works?

A. Mr. Kleinert write for me.

XQ155. And one came?

A. And one came to the shop.

XQ156. About when was that?

A. Oh, a very short time afterwards.

XQ157. Well, when was that?

A. In the beginning of January.

XQ158. Did you try it in the camera?

A. No, it was impossible because we used sprocket one inch diameter in the camera and the

internal gear is something like three inches and a half.

XQ159. You did not use it because it was not of the right size?

A. That is right.

XQ160. And then you planned out the Maltese cross stop motion and had Mr. Pearce make it?

A. Yes; Pearce made it.

XQ161. Had you had any experience before this in stop motion?

A. Well, I got the idea from an old spring watch to stop winding too high; now I had the idea from that, but I made it much stronger, of course; and I think I have got the same thing in my house now.

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XQ162. What I meant now was that before this time had you had any experience with machinery that had the stop motion?

A. Well, no.

XQ163. There was no stop motion that you know of in any motion picture camera or projector?

A. No, because no motion picture machines made at that time.

XQ164. What do you mean by "no motion picture machines made at that time?"

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A. Because I never heard of any machinery of that kind.

XQ165. Do you mean a camera?

A. A camera or projector.

XQ166. You mean both a camera and a projector?

A. Yes.

XQ167. Didn't Edison have one when you were with him?

A. Well, he has got a camera to take pictures with, a film for the kinetoscope; but I never see

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machinery of the camera; I never see the inside; I don't know how he is working it.

XQ168. You only saw the outside of his camera?

A. I only saw the outside.

XQ169. And that was only used for taking pictures for the kinetoscope?

A. That is right.

XQ170. You saw it used for that purpose, I suppose?

A. Yes.

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XQ171. Didn't you ever operate the camera itself?

A. No.

XQ172. You had no experience then with motion picture cameras before you went to Mr. Latham?

A. None at all.

XQ173. Why did he employ you if you had had no experience with motion picture machinery?

A. Well, because my business was working in invention; the same as now; people come to see me and give me an idea and I develop the whole thing.

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XQ174. That is your business now?

A. In London, yes; and of course when I worked with Mr. Edison I worked for the chief electrician, and the chief electrician gave me an idea and I developed the idea for him.

XQ175. Had you had any experience with films while you were in Edison's employ?

A. No; that was not my department.

XQ176. You had nothing to do with the films he used?

A. Nothing at all.

XQ177. You saw them, I suppose, of course, frequently around the factory?

A. I just saw one time on the kinetoscope the machinery running; that was all I saw.

XQ178. Hadn't you seen films lying around?

A. No, because that was not my department; it was Mr. Dickson's department; I had nothing to do with that department.

XQ179. Where was your work done in the Edison factory?

A. In the machine shop.

XQ180. You have spoken of a kinetoscope film brought to you by Mr. Otway Latham?

A. Otway Latham, yes.

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XQ181. Will you describe that film as best you can; I mean will you tell what it looked like, felt like, its color, how thick it was and how wide, as near as you can tell?

A. Well, it was no color; it was white and black; black and white; the size was $\frac{3}{4}$ of an inch by 1 inch.

XQ182. How thick was the film, as near as you can tell?

A. Well, perhaps 1/64th or less; because at that time they were not regular, the films. Some parts very thin and some parts very thick on the same piece. It is very hard to tell.

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XQ183. Do you mean 1/64th of an inch?

A. Yes.

XQ184. A pretty thick film, wasn't it?

A. No, that is too thick; it is much too thick, it is very hard to tell. There are so many differences; some is very thick and some very thin.

XQ185. Do you know what the average thickness of the motion picture films used commercially today is? If you don't know, just say so.

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A. No, by my micrometer I can tell you.

XQ186. But you don't recall, yourself, what that thickness is?

A. No, I don't remember.

XQ187. Was this old kinetoscope film that Otway Latham brought you thicker or thinner than the ordinary motion picture films of today?

A. Oh yes, it was the first film; it was not perfect; now they have got some good films, perfect films all over.

1253 XQ188. In what way was that film not perfect?

A. Because they had got no tools to do it.

XQ189. Well, as far as the film itself is concerned in what ways was it imperfect; I mean the old film of the kind Otway Latham brought you to the Frankfort shop?

A. That was different in the thickness on the same piece; different thickness.

XQ190. Anything else?

A. Nothing else.

XQ191. How about its color; what was it?

A. Black and white; no color.

1254 XQ192. What was the color of this kinetoscope film before pictures were taken on it?

A. Why very pale green; the emulsion.

XQ193. Was it so you could see through it, or not?

A. No, it was opaque.

XQ194. Was that the kind Edison used when you were at the Edison factory?

A. Yes, I think so.

XQ195. I suppose you saw the exhibitions of the kinetoscope given at the Edison factory while there?

A. I saw just one.

XQ196. Weren't you at all interested in what Edison was doing?

A. I had nothing to do with that kinetoscope business.

XQ197. Did you not have any curiosity about it while you were there?

A. Of course, yes; but no chance, I had no chance.

XQ198. What do you mean by no chance?

A. Because I was working in the machine shop, and the kinetoscope was upstairs in the precision room; fine work; and of course I had nothing to do upstairs.

XQ199. You were interested in the film they were using, I suppose, weren't you?

A. No.

XQ200. Did you ever handle it while you were there or see a piece of it?

A. No, I don't think I see any of it only one time, the kinetoscope, the kinetoscope running; there was only one time I saw it.

XQ201. Where was this picture of the swinging incandescent lamp taken?

A. In Frankfort Street, in the Scott Building.

XQ202. In what part of the building?

A. On the third floor, in the shop.

XQ203. You have referred to another picture being taken on the roof of that building?

A. Yes.

XQ204. When was that picture taken?

A. Well, this one I have mentioned already; Mr. Latham, Mr. Gray Latham, Mr. Kleinert, and myself and my son; it was a very short time after the camera was repaired with the new gear; and sometime after that we take another picture of two Frenchmen fighting.

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XQ205. When was the picture on the roof taken?

A. Let me see; it must be the first day of March; yes, it must be the first day of March.

XQ206. What year?

A. 1895.

XQ207. How do you know it was the 1st day of March?

A. It was a short time after the camera was repaired, and another one of the two Frenchmen fighting was about two or three weeks afterwards.

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XQ208. When did the camera break down?

A. Two days after we take the swinging lamp; we put too much speed on it, and one tooth broke.

XQ209. How do you know that it was the first of March when the picture was taken on the roof, and not the 1st of April for instance, or some other time along in the spring?

A. Because we take the picture of the lamp on the 26th of February, and you see you have a couple of days to make a new gear and put inside of the camera, a very short time; perhaps two or three days after.

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XQ210. What I mean is this; it is now a good many years ago since these things happened, and it is pretty hard to remember dates of the month, or the day of the month of things that only happened a year or two ago. Now what I want to know is how you now are able to say that the picture of the swinging lamp was taken on February 26th, 1895, rather than in March or April or some later date, and why you say the pictures on the roof were taken in March, 1895. Now if you can explain to me how you are enabled to fix those dates in your memory I wish you would do so?

A. Why, because from my testimony I said a date, or something like that; now everything follows after that. But of course I can't say the date exactly.

XQ211. In short you are relying for these dates now upon the testimony you gave in 1898, are you not?

A. Yes, I think so. At that time I remember the date much better than now.

XQ212. How many machines did you make for Mr. Latham altogether, counting both cameras or taking machines and projecting machines; how many?

A. Why, there is 10.

XQ213. How many were cameras?

A. Three.

XQ214. And seven projecting machines?

A. Seven projecting machines; of course this one here has come after (referring to Complainant's Exhibit Latham Drawings).

XQ215. Of these three cameras that you made which one was used in taking the picture of the swinging lamp?

A. That was the only one.

XQ216. And was that same one used in taking the picture on the roof and the picture of the Griffo-Barnett fight?

A. Yes, and the same one used for the Niagara Falls; and the two new ones made after that were with me and Mr. Gray Latham to Mexico.

XQ217. And that first camera you haven't seen since you left the Frankfort shop?

A. I never see it again.

XQ218. Have you seen any of the three cameras since that time?

A. Well, when we moved to—from Frankfort

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Street we moved to Beekman Street, and I don't know if I saw the first one, but the two new ones I know; I don't remember seeing the first one.

XQ219. When did you move to Beekman Street?

A. Oh, I don't remember the date.

XQ220. When did you last see the other two cameras; the two new ones, as you call them?

A. Well, that was the time I left the place, because I don't go there any more.

XQ221. You mean the time you left Mr. Latham's employ?

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A. Yes.

XQ222. And when was that?

A. Oh, Mr. Latham left before me; there was new people altogether.

XQ223. Well, when did you leave?

A. I left in 1896, but I don't know the date, the month.

XQ224. You have in your testimony in two or three places referred to a continuous machine; what did you mean by a continuous machine?

A. That is a projecting machine.

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XQ225. Why did you call it a continuous machine?

A. Because we don't use any stop motion; the film run all the time.

XQ226. The film was a continuously moving film?

A. That is right.

XQ227. And that was the way with all the projecting machines you built for Mr. Latham, as I understand it?

A. That is right.

By Mr. Page. Q. These continuous film projecting machines were what you have

referred to as the kinetoscope machines? A. That is not kinetoscope, but similar.

Q. After making those machines did you make any projecting machines with an intermittent feed? A. No, that is the one —this one here (referring to Complainant's Latham Drawings Fig. 1). I know we make one, but this one was never made (referring to Fig. 2); it is only a drawing, but it was never made.

XQ228. I read you Q14 to Q16 and your answers to them in your testimony given yesterday (reads to witness). How did you know that Edison's film was too narrow?

A. Well, this idea of Mr. Latham's; I can't explain his idea.

XQ228. Oh, it was Mr. Latham's idea that the Edison film was too narrow?

A. That is right.

XQ228b. Did he talk with you about it?

A. Yes, we decide altogether what size of film we must use for the camera, for projecting.

XQ229. Did you have some of the Edison film present at the talk? 1269

A. Well, only that one that Mr. Otway brought to me.

XQ230. I mean when you were talking at the Hotel Bartholdi with Latham did you have any of the Edison film there?

A. Oh, no; not at all.

XQ231. When did you make the two new cameras that you have referred to?

A. I started to build the two new cameras in Beekman Street.

XQ232. When was that?

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Eugene Lauste.

A. Well, I don't know the date now; I forgot that.

XQ233. What was the year?

A. 1895.

XQ234. But you can't remember the month?

A. Oh, no.

XQ235. You spoke yesterday about Mr. Latham bringing a draftsman to make the drawings for the patent?

A. Yes, that was in Beekman Street.

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XQ236. Then you said the machine was not put all together; what did you mean by that?

A. Well, Mr. Weit was working on the machine and we got some parts made and it was not finished; Mr. Weit explained to the draftsman what he have to do; after that I have nothing to do with that new projecting; that was the end of my work on that. After the draftsman came in I got nothing to do.

XQ237. What I wanted to know was what you meant when you said the machine was not put all together?

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A. We worked on the machine.

XQ238. Doing what work?

A. Making the whole part, the whole business; the rollers, the sprocket and everything; shutter everything, worm gear; not complete to put all together.

XQ239. Which machine was this that you are referring to?

A. This one (indicating Complainant's Exhibit Latham Drawings Fig. 1); the continuous motion.

XQ240. You say that the first camera that you made you used not only for taking pictures, but for projecting too; but the machine was not meant

for that; what did you mean by "the machine was not meant for that"?

A. Well, because the camera is all covered to keep in darkness you know; and for the projecting it is different; it must be all open to get the light on the back, and the lense on the front; that is the only difference.

XQ241. When did you use this camera for projecting purposes?

A. We used that a very short time after we take that picture on the roof, because we use the film of that picture of Mr. Latham and me and my son, and we tried to project that.

XQ242. Did you succeed in projecting it?

A. Not much, because it was nothing fit for that; that had proved the possibility of the stop motion giving much better results for motion pictures.

XQ243. In this first camera you made, how many sprockets were there?

A. Four.

XQ244. And how many rollers were there; I mean without the teeth?

A. Four.

XQ245. That makes eight altogether?

A. Eight altogether.

XQ246. How many of these were above the lense opening?

A. Two on top and two on the bottom.

XQ247. Do you mean two sprockets above and two below?

A. And two below the place where the picture is taken; two above the place where the picture is taken, and two below.

XQ248. And how many of the rollers were above where the picture was taken?

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A. Well, we got one on each sprocket; and after that we get another one on top at the suggestion of Mr. Dickson, and that makes an extra roller.

XQ249. Did the film move upward or downward?

A. Downward.

XQ250. After the film left the supply reel on the top, what did it first pass over? I want you to tell me in detail all about these sprockets and rollers and how the film passed over them; now beginning with the film as it leaves the top reel, what did it run to first?

A. Well, from the first sprocket; the first sprocket is continuous.

XQ251. It ran to a sprocket that was continuously driven?

A. Yes, that is it.

XQ252. Then what did it go to next?

A. It goes to the second sprocket, the intermittent sprocket; between the two is a loop.

XQ253. Then where did the film go?

A. After that it passed from the gate or window, if you like, take the picture, and the bottom sprocket stop motion pulled down.

XQ254. After the gate it passed to the stop motion sprocket and that pulled it down?

A. That is right, yes.

XQ255. Was that sprocket continuously driven or intermittent?

A. Intermittent, and then it makes a loop again and the last sprocket feed continuously.

XQ256. And below the gate there was first an intermittent sprocket and then a continuous sprocket?

A. That is right.

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XQ257. You say there was also a loop; where did that loop come; between the two sprockets?

A. Between the two sprockets; that is right.

XQ258. Then the film went from the lowest sprocket to the final reel where it was stored?

A. Yes, and winding up by friction.

XQ259. Above the gate where was the loop; between what?

A. Above the gate? We have two loops, one on top and one on the bottom.

XQ260. I mean the one now that is above the gate where the picture is taken; between what sprockets and rollers is that loop?

A. Between the continuous and the stop motion, or the stop motion and the continuous.

XQ261. Do you mean between the first sprocket continuously driven and the intermittent sprocket below it, but above the gate; was the loop between those two?

A. Yes; but the stop motion is before the continuous; after the gate was the stop motion.

XQ262. I am speaking of above the gate?

A. Oh yes, above the gate.

XQ263. Now, then, if I understand you rightly, the loop was between the continuously moving sprocket that the film went to first and the intermittent sprocket a little below it?

A. Yes, the intermittent sprocket pulled the loop; the feeder makes another winding.

XQ264. How about the rollers; where were the four rollers placed?

A. On each sprocket, to keep the film on the teeth of the sprocket.

XQ265. How did the shutter of this first camera compare with the shutters shown in these drawings (Complainant's Exhibit Latham Drawings)?

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A. The shutter on the camera is very small.
XQ266. What was the size of this small shutter?

A. If I remember it, about 6 inches or something like that; 6 or 7 inches.

XQ267. You have testified that you had no contract with Mr. Latham?

A. No contract with Mr. Latham.

XQ268. But he gave you wages to work for him, and promised you some share in the company "if you succeed." What did you mean by that, "if you succeed"?

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A. If I succeed to carry out his idea.

XQ269. Do you mean that if you succeeded in making a machine that would work he would give the stock?

A. That is right.

XQ270. And that if you did not succeed you would not get the stock?

A. Of course.

XQ271. When did he give you this stock?

A. He give me that just a few days after we take that picture on the roof.

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Stock certificate is produced to Counsel for Defendant.

XQ272. This certificate is for 200 shares in the Lambda Company, is it not?

A. Yes.

XQ273. What company is that?

A. The company that Mr. Latham formed, but I can't explain nothing about that.

XQ274. Was it a company that he organized for this motion picture business of his?

A. Yes, that was the first company.

XQ275. You say the last time you saw Mr.

Woodville Latham was when you gave your testimony in 1898?

A. Yes.

XQ276. Where is he now, do you know?

A. I just heard a few days ago he has died, and his two sons, too.

XQ277. Do you mean that you have heard that all three are dead?

A. Yes.

XQ278. Will you let me see that telegram that you produced?

It is produced to Counsel for the Defendant.

XQ279. You referred to a telegram sent you in November, 1894? That telegram is signed "Gray Latham," is it not, or at least his name appears at the bottom?

A. Yes, Gray Latham.

Adjourned till 1 P. M.

Met pursuant to adjournment as before.

XQ280. In this testimony that you gave in 1898 in the Latham vs. Castler vs. Interference, I notice that reference was made to a number of sketches that were put in as exhibits in that case. Where are those sketches?

A. I don't know, I have had the rough sketch myself; I had my furniture in storage here and all the papers and everything is stole; I can't find anything.

XQ281. Have you looked for them?

A. Oh yes.

XQ282. And you can't find them?

A. I can't find nothing.

XQ283. Do you know what became of the

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sketches that were offered in evidence in this 1898 testimony?

A. No, I don't know.

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By Mr. Kenyon: I call upon Counsel for Complainant in this case to produce the exhibit sketches that are referred to in the deposition of Eugene Lauste offered in evidence by him, Complainant's Exhibit Lauste Deposition. From a quick glance at this testimony it would appear that a number of sketches were offered in evidence and referred to in his testimony. It is difficult, at least in some places, to understand the testimony without reference to those sketches. For this reason we call upon complainant to produce them.

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Counsel for Complainant replies that he is probably much more anxious to produce these sketches than Defendant's Counsel is to have them; that every possible measure has been adopted to find them, but so far without success, the last information with regard to them being that they were all sent by the Clerk of the Court of Appeals of the District of Columbia to Mr. Henry A. Seymour of Washington, D. C., who was at that time attorney for the Anthony & Scoville Company, assignees of the Latham application; that all of the exhibits were sent by Mr. Seymour in 1901 to the Anthony & Scovill Company, and that some years after that they were all destroyed. It is possible that some of the paper exhibits were not so destroyed, and efforts are now being made to ascertain definitely this fact.

To date, however, no trace of any of the exhibits has been found beyond what is above stated.

XQ284. In this 1898 testimony of yours, and in your testimony given yesterday and to-day, there are some references to a picture being taken of a Griffon-Barnett fight. What was the date of that fight?

A. I don't know exactly; sometime, I think, in May, 1895.

XQ285. You can't fix it any closer than that?

A. It is easy to find out. The Police Gazette Journal make a report of that; if you get a copy we can find out.

XQ286. Was that a prize fight?

A. It was a prize fight for fun.

XQ287. I notice in your 1898 testimony you refer to an Eidoloscope film; what was that film?

A. That was the wider film.

XQ288. What was the Eidoloscope?

A. Well, the same as the Lambda transferred to the Eidoloscope Company.

XQ289. I mean what kind of a machine was it, 1293 the Eidoloscope?

A. It is just the same as the Lambda; the same machine.

XQ290. Was it a kinetoscope machine?

A. Projecting machine, or taking machine; which one do you mean?

XQ291. What I want to know is what kind of a machine the Eidoloscope is?

A. Just the same; nothing changed in the machine; it is only the name of the company; that is all.

XQ292. Describe the Eidoloscope machine.

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Eugene Lauste.

A. The Eidoloscope machine is a kinetoscope machine, but arranged for projecting.

XQ293. Otherwise it is just like the kinetoscope machine?

A. That is right, yes.

XQ294. In this Eidoloscope machine do you look through the peep-hole to see the pictures?

A. Oh no, no; it is projected on a screen.

XQ295. When you were getting up the first taking machine at the Frankfort shop, where did you get the idea of the loop?

1295 A. The idea of the loop, I found that in some books.

XQ296. What books?

A. It looked like a catalogue; I don't know what book exactly; I don't know what kind of a machine, but I find something that looked like a loop, and that gave me the idea.

XQ297. Where did you see this catalogue?

A. Oh, when I worked for Edison; that was in 1891.

XQ298. Was it in his laboratory?

A. No, in the photographic room.

1296 XQ299. That is, in Edison's photographic room?

A. Yes, in Edison's photographic room.

XQ300. Was it an American publication or a foreign publication?

A. It must be American, I think.

XQ301. Do you remember the name of the author?

A. Oh, nothing at all; just I found that on the table and I watched that book; I can't say anything more about that book.

XQ302. How large a book was it?

A. Oh, something like that (pointing to a book

on the table entitled *Joscelyn Cheshire* by Kennedy, Doubleday, Page & Company).

XQ303. This book looks like a novel of the ordinary size and seems to have between 300 and 400 pages?

A. Yes, I don't know how many pages, but this looked more like a catalogue; pretty near all advertisements inside.

XQ304. It was a bound book like this one, was it?

A. Yes.

XQ305. This book, I understand, is a 12-mo. book; it was about that size?

A. About that size.

XQ306. In your testimony given in 1898 you say that you saw Marey use a loop in a taking machine in 1888, in Paris?

A. Yes, that is another mistake in my testimony, because I said when I was in Paris I saw Mr. Marey himself, and Mr. Marey explained to me all his machines; and I found that he used a loop; just the same, but that was 1898.

XQ307. What time in 1898 was it?

A. Oh, well, in the summer time.

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XQ308. What is Mr. Marey's full name?

A. E. J. Marey; I don't know what.

XQ309. Is he living?

A. He has died.

XQ310. When did he die?

A. 5 or 6 years ago.

XQ311. Did he show you his taking machine in which he had the loop?

A. Yes, and I have got a photograph of that machine, too, but it is in my house.

XQ312. Did you see him taking pictures with it?

A. No.

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Eugene Lauste.

XQ313. Did you see him project any pictures?

A. Oh, he don't make any projections; only scientific apparatus, for recording the motion.

XQ314. Did he show you any films taken?

A. Yes.

XQ315. What did they look like?

A. Oh, a very large film.

XQ316. How long a film did he have?

A. Perhaps a piece 50 feet long, or something like that.

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XQ317. And how large were the pictures?

A. About 3 inches, a very wide film, no perforations. Worked by—the stop motion was made by electro magnet part.

XQ318. When you made this first camera, for Mr. Latham where did you get the idea of the carrying reels?

A. Well, that is my idea; a very simple thing too; must have something to carry a film.

XQ318. Did you get that from any book or any other source? A. Oh, no.

XQ319. You worked it out yourself?

A. Yes.

1302

XQ320. What is a sprocket wheel?

A. Why it looks like a drum with teeth.

XQ321. Did the first camera work any differently after you put in the supplementary sprocket suggested by Dickson from what it worked before?

A. Well, it was not a sprocket; it was a roll; it is not a sprocket; but the pull, the feeder is much better; but that don't change anything in the camera, it is just the same.

XQ322. What difference did it make in the working of the camera?

A. Well, the feeder is more steady; that is the only difference.

XQ323. Before you put that supplementary roller in did you have any trouble with the camera?

A. Very few.

XQ324. What troubles did you have?

A. Well, the pulling—there was only one tooth pulled the film, and if it pulled too heavy it would make a jar and tear the film, tear a hole.

XQ325. You had this trouble with the tearing of the film before you put that supplementary roller in, did you?

A. Well, very few, yes.

XQ326. Up to what time did you have that trouble?

A. Well, we have no trouble if you don't put too much film in.

XQ327. But if you put a big weight of film on you did have the trouble?

A. Yes.

XQ328. Did you have that trouble in the Griffon-Barnett fight?

A. Yes, that was what decide us to put the new roll.

XQ329. So you put that in after the Griffon-Barnett fight?

A. Yes.

XQ330. While you were working on the first camera or the first projecting machine at the Frankfort shop did Mr. Dickson bring you any film?

A. Never.

XQ331. I read you XQ210 and your answer in your 1898 testimony (reads to witness): What did

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Eugene Lauste.

he mean by saying "It is very compromising for me"?

A. Because he was engaged for Mr. Edison, and he can't do any work for somebody else; and he was perfectly right.

XQ332. That was all he meant, so far as you know?

A. Yes.

XQ333. Before you put in this supplementary roller that Mr. Dickson suggested did the top reel pull direct from the loop or not?

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A. Pulled right from the sprocket; what you call the feeding sprocket.

XQ333a. It did not pull direct from the loop?

A. Oh, no, no; that can't be.

XQ334. Did you ever have any trouble with that top loop, the one above the gate?

A. No.

XQ335. Is that so before you put in Dickson's supplementary roller?

A. Yes.

XQ336. You had trouble before that, did you?

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A. No trouble at all; that is what I say; except if you put too heavy a reel, too much film; this is a very nice picture that we took up on the roof (producing photograph to Counsel). We took that all right with the machine without any trouble and the two Frenchmen fighting just the same; no trouble at all.

XQ337. Well that trouble was simply tearing the film on the top sprocket, wasn't it?

A. On the top sprocket.

XQ338. And that trouble had nothing to do with the top loop?

A. Oh, no.

XQ339. And do I understand you that before you put this supplementary roller on you had no trouble with the top loop at all?

A. None at all; we took the whole bull fight in Mexico without any trouble; and that was a very heavy reel at that time, because we had about 4,000 feet of film.

XQ340. I read you RXQ275 in your testimony of 1898, and your answer (reads to the witness) : Why do you say that it was impossible to run the Edison film through that machine?

A. Because the film is too narrow to run through the sprocket.

XQ341. Was that the only reason?

A. That was the only reason; if we have a narrow sprocket to fit the Edison film it would run just the same.

XQ342. You came over to this country on this trip just to give your testimony, did you not?

A. Yes.

XQ343. And arrived here last Monday?

A. Last Monday.

XQ344. Who asked you to come?

A. Mr. Marvin.

XQ345. Do you know his full name?

A. No; I don't know it.

XQ346. What company is he connected with?

A. Now, it is the Picture Motion Company, or something like that.

XQ347. Of course he promised to pay your expenses?

A. Yes.

XQ348. What agreement did he make with about paying you for your expenses and time?

A. Well, to pay all my expenses, my fare, and £100 for my trouble.

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Eugene Lauste.

XQ349. Has that been paid yet?

A. No, not yet.

XQ350. But you of course expect it to be paid?

A. Yes.

XQ351. Has any promise been made to pay you any other money or give you anything else besides?

A. Nothing else.

Re-direct Examination by Counsel for Complainant:

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RDQ352. I understand that you have a photograph, or one of the pictures taken on the roof of the Frankfort Street shop in 1895. Will you produce it?

A. Here it is (producing photograph).

RDQ353. Please state what that photograph is?

A. It is only a foolish thing to try the camera.

RDQ354. I mean what is this photograph; one taken on the camera or an enlargement of it?

A. It was taken with the camera made by me; the first one.

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RDQ355. Is this the size of the picture that was originally taken?

A. No, that is an enlargement.

RDQ356. This is an enlargement of one of the photographs on the film taken on the roof on the occasion to which you have testified before?

Objected to as leading.

A. Yes.

The photograph produced by the witness is offered in evidence and marked Complainant's Exhibit Lauste photograph.

RDQ357. You have stated in your testimony that the feeding mechanism of the first camera or taking machine which you say was tried on February 26th, 1895, was the same as the feeding mechanism illustrated in Figures 2 to 8 of the Latham Exhibit drawings. I gather from your testimony under cross-examination this morning that there were some differences between the feed mechanism of the camera and that shown in these drawings to which you have not heretofore referred. Will you now indicate what those differences are?

A. I just find out something wrong in the drawing here, because this exactly is the camera I made (producing sketch); one, two, three, four sprockets; that second sprocket is an intermittent sprocket; but the stop motion is fixed on the shaft of that sprocket (pointing to the third sprocket from the top); this one is connected with this one (referring to the two intermediate sprockets), by a steel belt; one strap here and one here and when it pulls the bottom one it pulls the top one, and when the bottom one stops the top one stops. The two feeder sprockets are run by beveled gear (referring to the top and bottom sprockets). And just when I looked at the drawing I found something wrong here because it puts the stop motion on the top one (referring to 50 in Complainant's Exhibit Latham Drawings). If you take the picture down we must show it down; but here the machine is just the reverse, to go up; it must be a mistake of the drafts.

RDQ358. Would it make any difference in the operation of the camera whether the film moved up or down?

A. Well, that don't make any difference, of

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Eugene Lauste.

course; if you use a projector in the same way; if you take the picture up you must reproduce it up; you take it down you must reproduce it down.

RDQ359. Well, in the first taking machine which you made, did the film move up or down?

A. Down; all the way down.

RDQ360. So that your first taking machine differed from these drawings in that respect?

A. Yes.

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RDQ361. And it also differed in having two intermittent sprockets connected together by a steel belt?

A. By a steel belt, yes.

RDQ362. The upper sprocket being driven by the Maltese cross sprocket; is that right?

A. No; the top one and the bottom one is continuous; the top and the bottom sprockets are the feeders, and feeding continuously all the time; and this one (pointing to the second sprocket from the top and the third from the top) are intermittent sprockets, and this one (pointing to the third from the top) is the stop motion, and the loop between (pointing to the upper loop).

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The sketch produced by the witness is offered in evidence and is marked Complainant's Exhibit Lauste Sketch of first taking machine.

Re-cross Examination by Defendant's Counsel:

RXQ363. This sketch shows a second loop near the bottom, does it not?

A. Yes; you get one here; when we get the loop at the top we have none at the bottom, and reversing; when we get the loop here (pointing to the bottom) then we have no loop at the top.

RXQ364. It is evident, is it not, that these drawings, Complainant's Exhibit Latham Drawings, were not made from the first camera?

A. Very, very near, very near; except there were only three sprockets on the drawings and we used four.

RXQ365. Referring to this photograph that you have produced, which you say is an enlargement, who enlarged it?

A. I forget that.

RXQ366. Did you?

A. I think in Paris; oh, yes, I know now it was one of those chief electricians of the Casino of Paris; he was a photograph amateur.

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RXQ367. What did he use to enlarge from?

A. From the small piece of film.

It is stipulated that the signature may be waived.

New York, April 10, 1911, 11 A. M.

Met pursuant to adjournment at the offices of Kerr, Page, Cooper & Hayward, 149 Broadway, New York City.

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Present—PARKER W. PAGE, Esq., Counsel for Complainant. Mr. RICHARD EYRE, Counsel for Defendant.

WILLIAM K. L. DICKSON, a witness called on behalf of the Complainant, having been first duly sworn, deposes in answer to interrogatories by Complainant's Counsel as follows:

Q1. Please state your name, age, residence and occupation?

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William K. L. Dickson.

A. William Kennedy Laurie Dickson, Consulting Engineer, 4 Denman Street, Piccadilly Circus, London. I am 49 years of age.

Q2. Have you ever known personally Mr. Woodville Latham?

A. Yes.

Q3. When did you first become acquainted with him?

A. In the early part of 1894.

Q4. What was Mr. Latham's business or occupation at the time you knew him?

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A. When I first became acquainted with him, he was interested in the purchase of Edison kinetoscopes and made such purchases from Mr. Edison at that time. It was in my province to exhibit the machines to purchasers and so I became acquainted with that gentleman and his sons.

Q5. Was Woodville Latham a scientific man?

Mr. Eyre: Objected to as irrelevant and immaterial.

A. Yes.

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Q6. Did you ever have any other business relations with Mr. Latham in connection with moving picture apparatus other than that which you have stated in a preceding answer, and if so, will you please state fully what your relations with him were?

Mr. Eyre: Objected to as it appears to bring new matter into the case which is not proper rebuttal testimony and notice is given that at the proper time motion will be made for leave to take testimony in reply to this or any similar line of testi-

mony or to expunge the same from the record, and it is agreed that this objection be made now once for all to any testimony of this character.

A. As a brief preamble, prior to answering these questions in full, I would like to say that a few days ago, I read for the first time Mr. Woodville Latham's testimony in an Interference in the Patent Office under the head of Woodville Latham vs. Thomas Armat and found same to my intense surprise, incomprehensibly vindictive. Had I known of this testimony nothing would have kept me from coming over and correcting such statements, as I hope now to do, hoping that this may not be out of place.

As stated before, I met Mr. Woodville Latham for the first time in the early part of (to the best of my knowledge) 1894, when he came to the Edison Laboratory to purchase six or more kinetoscopes which he intended to use for exhibition purposes in New York. I found Mr. Latham to be a congenial spirit, owing to his scientific attainments and our friendship grew and throughout such acquaintanceship, we spent many evenings discussing the scientific questions of the day. One subject, however, was rigidly tabooed, namely, moving photography. Professor Latham, I believe, was a man of letters, Professor at a Virginia College or University, a lecturer in Physics. Shortly after my meeting him at the Edison Laboratory, I invited him to my home and to cut this testimony as short as possible, I will now give the salient points that I presume may be of interest in this testimony, namely, Mr. Woodville Latham, shortly after I had made his acquaintance, asked

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me to recommend him a good mechanician without stating what he wished him for. I recommended a late employee of Mr. Edison, whom I knew to be a thoroughly capable man in his line. A week or so later, Mr. Latham called at my house, thanked me for the recommendation, remarking that he was just the man he wanted, and then for the first time, disclosed that he wished to carry out some idea he had in moving photography. This rather took me aback and I told him that I should never have recommended anyone to him had I known for

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what purpose he wished to use this mechanician. However, the deed was done and there was nothing more to be said. Mr. Woodville Latham then did his best to persuade me to come and join forces with them. This I steadfastly declined owing to the fact that my position and interest with Mr. Edison were entirely satisfactory to me, and that the Latham proposition at that time was an unknown quantity. Sometime in October, 1894, Mr. Woodville Latham and his two sons, Messrs. Otway and Gray Latham, accepted an invitation to dine at my house, at 166 Cleveland Street,

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Orange, N. J., and after the guests had all left, Mr. Woodville Latham and his two sons made a proposition to me in the presence of my wife, which was untenable, which, however, was modified and to which I agreed heartily, namely, that as Mr. Woodville Latham was desirous of going into public exhibitions of the kinetoscope using same for projecting purposes, if on trial, it proved satisfactory, I should use my best endeavor to persuade Mr. Edison to give them the exclusive right for this special branch of the business, and that if I succeeded, I should have a substantial interest, subject, of course, to Mr. Edison's approval. I signed such

a letter, which was approved of by my wife, whose sense of right and wrong naturally was of the highest order.

I immediately set to work and arranged to make a trial at Columbia College, with the courtesy and in the presence of the Professors and one or two other gentlemen, Woodville Latham and his sons being invited. All the commercial kinetoscopes, were in use but I was able with some parts of an obsolete machine to demonstrate and prove to my own satisfaction and that of Mr. Latham, and the others present, that if I succeeded in persuading Mr. Edison to make such a contract as previously stated, regarding the use of the Edison film and kinetoscopes possibly with slightly increased opening in the shutter, and as intensely concentrated light as possible, all would be well. The short film and mechanism were, of course, replaced in Mr. Edison's laboratory and the next morning I did my best to persuade Mr. Edison to grant these gentlemen this privilege. Mr. Edison, however, pointed out to me that he had already bound himself to Messrs. Raff & Gammon. I need not say that my disappointment was intense and I called on Mr. Woodville Latham to acquaint him of my failure. It was then I learned from this gentleman that they intended, therefore, to go into this whole business themselves and that he was going to carry out some ideas he had and construct machines to produce negatives and positives for projecting purposes. It is stated in the Woodville Latham-Armat testimony among other things, that I was in his employ. This nonsensical, and for some hidden purpose, vindictive remark, I must emphatically deny, and while I have the opportunity, wish

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William K. L. Dickson.

to state that at no time was I ever in Mr. Woodville Latham's employ, nor gave him any suggestion or ideas in connection with moving photography. I note in the Woodville Latham testimony that there is a mention of a Dickson Stop Mechanism which was experimented on and failed. The truth of the matter was simply this: That during one of our many scientific discussions, he caught me napping and I asked him if he had seen a curious stopping device for actuating a clock-work, which I described not having the slightest intention at the time that he should use this for the work on which he was engaged. I was careful not to ask him what he was doing or what his mechanism was, as I wished my relations with him to remain purely social. Mr. Latham seemed to jump at the conclusion that this would be most useful. I, however, pointed out to him I fancied it would be far too slow for his purpose, and that I certainly did not wish him to bring me into this business unless I decided to leave Mr. Edison and join them, which at present I had not the remotest idea of doing. During the months of December,

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intention at the time that he should use this for the work on which he was engaged. I was careful not to ask him what he was doing or what his mechanism was, as I wished my relations with him to remain purely social. Mr. Latham seemed to jump at the conclusion that this would be most useful. I, however, pointed out to him I fancied it would be far too slow for his purpose, and that I certainly did not wish him to bring me into this business unless I decided to leave Mr. Edison and join them, which at present I had not the remotest idea of doing. During the months of December,

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1894, and January, 1895, I had several opportunities of visiting on invitation, a shop which they had in New York and saw that they were in full swing, making so-called modified kinetoscope projectors. At the same time, they were working on an apparatus for taking negatives. I particularly avoided examining same and cannot testify as to the construction of this same mentioned taking machine until I received an invitation from Mr. Woodville Latham to come over as quickly as possible as he had something particularly interesting to show me. On arriving on the scene, I found Mr. Otway Latham, Mr. Gray Latham, Mr. Eugene

Lauste and another workman very much excited and they proceeded to show me every detail of the beforementioned taking machine. A short piece of film was tried and I was asked to develop same which I did. Mr. Otway Latham for some hidden reason, asked me to write a note dictating the words "To my friend Woodville Latham, Compliments of W. K. L. Dickson," etc. If his object was to compromise me, he very nearly did succeed and so I fell into the trap, for as previously stated, throughout all these proceedings, neither by word or action, did I have anything to do with their work. After this, I thought it best to have as little to do with them as possible, until I had made up my mind if I should join them or not. The crisis came on April 2nd, 1895, when I was accused by an individual then in the employ of Mr. Edison, to the effect that my relations with Messrs. Latham were not honorable, etc. etc. That person had the pleasure of being confronted with Mr. Edison by me and asked to repeat the remarks he made to me. Mr. Edison's remark was, "I don't believe a d— word of it." I then insisted on Mr. Edison making his choice between the aforementioned person and myself, but either owing to Mr. Edison having contracted with this person, allotting to him full power or whatever it was, and the decision not being sufficiently whole-hearted, I lost my temper and resigned on the spot. The date, as previously given, was April 2, 1895. I then joined my own company, the Portable Electric Light & Power Company, and throughout the time I was engaged in this company, Messrs. Latham received from me occasional visits and towards May, I assisted in the taking of a glove contest on the roof of Madison Square Garden.

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William K. L. Dickson.

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Before closing this preamble, I might add, that I notice in the Latham testimony, that a certain amount of stock in the Lambda Company was given me. This is quite incorrect. The true facts of the case were these. Mr. Woodville Latham insisted in forcing this stock on me and which I as persistently refused, there being no *quid pro quo*, as long as I was engaged with Mr. Edison and not having done anything for the Latham Company. Until I left, I could not, of course, take something for nothing. As I was still towards the last undecided, if I should join them or not, at the advice of my solicitor, Mr. Edmond Congar Brown, of New York, I sent Mr. Latham to him and learned after that Mr. Brown decided in my interest to hold such stock in trust, pending the time that I should decide to join them.

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In conclusion, to this rather lengthy preamble, I am fortunately able, even although I learn with much regret, that the Messrs. Latham have passed on, to give an account of themselves elsewhere, that I have other witnesses who can substantiate all I have said in regard to the personal slander which I need not say, has very much upset me.

I take this opportunity of apologizing, at the same time thanking Counsel on both sides, for their kind indulgence.

Counsel for defendant states that he is hardly in a position to accept the thanks of the witness as he feels that he must now object to the answer as being incompetent, as bringing in reference to testimony which has not been given in this case and which cannot be duplicated in this case, since it

appears that Latham, whose prior testimony in Interference was criticised, is dead. The answer is further objected to as irrelevant and immaterial.

Recess.

After Recess.

Q7. You state in your last answer that you were employed by Mr. Edison in 1894 or 5. In what department were you at Mr. Edison's place?

A. The Electrical Mining or Milling Department and the Moving Picture Photographic Department.

Q8. How much experience did you have with the apparatus and the processes practiced in the Moving Picture Department?

A. In 1887, Mr. Edison asked me if I understood photography. I replied I did, also the chemistry of photography. He then proposed to start a department in which I was to have exclusive charge developing his ideas in moving photography, which I did from that time on until I left him.

Q9. And you left him, as I understand it, April 1347 2, 1895?

A. That is right.

Q10. You have also referred to seeing a camera or taking machine in Woodville Latham's shop. I wish you would now state in as much detail as you can the exact circumstances connected with the incident, giving as far as you are able, the dates when you first saw that machine sufficiently to understand its construction?

A. I received a letter of invitation from Mr. Woodville Latham a month or so before I left Mr. Edison in which letter Mr. Woodville Latham

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William K. L. Dickson.

urged me to come over as soon as possible to see what they had accomplished. I found those present Mr. Otway Latham, Mr. Gray Latham and Mr. Eugene Lauste, a workman. There may have been others, but I do not remember, except that I understood Mr. Woodville Latham was not well on that evening, as I recall. In the centre of the room or shop the taking machine, which I was aware had been worked on for some time past, was apparently finished, judging before I was shown the interior by the general excitement of those present.

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With a flourish the cover was lifted displaying an upright mechanism composed, to me as first impression, of endless rollers, sprockets, etc. On examination and witnessing the run made by Mr. Eugene Lauste, Mr. Otway Latham assisting in threading a piece of (what appeared to be) spoilt film, I noticed that this piece of film was passed over a sprocket wheel, the film being held in place by a roller pressing against the sprocket wheel holding the film in position. From this sprocket a loop was formed and passed to a second sprocket, the film being similarly held in

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position by a roller, the film was next carried through a window gate. Below the window gate the film was passed over a sprocket wheel, the film held in position by another roller. From this sprocket wheel the film formed a loop and was placed over a fourth sprocket wheel again similarly held by a roller. I noticed that next to the lowest sprocket wheel, which I might count as the third sprocket wheel, was rigidly attached to a Maltese cross stopping device which I understood at the time was to be their method of stopping and starting the film. This third sprocket wheel was fast-

ened in some way with the second sprocket wheel immediately above the gate and the two outside sprocket wheels 1 and 4 were similarly attached. After running through this short piece of black appearing film the box was taken into the dark room situated at the end of the shop, and Mr. Otway Latham and one other, presumably Mr. Eugene Lauste, threaded the machine with some sensitive unexposed film. This was brought out of the dark room and the question arose how to make a record on this film. I found, however, that it had been settled to photograph the filament of an incandescent lamp and someone present suggested swinging same during the exposure. I was asked to turn the handle, I stupidly did, and further adding to my stupidity by not being able to see through their purpose, developed for them a short piece of the exposed film in the previously mentioned dark room, tearing off a piece of about six inches long, the result being a sharply focused and clearly defined image of the carbon filament standing out in black relief against a more or less mottled background. Mr. Otway Latham wished his father, who was ill at the Bartholdi Hotel, to have that night the first sample and asked me to pin this to a piece of paper, he himself dictating the words which I remember perfectly to be "To my friend Woodville Latham, compliments of W. K. L. Dickson." I should not have remembered the exact date and hour of this note had not my memory been refreshed by reading Mr. Latham's testimony but I am absolutely certain that in every detail this event took place at midnight or thereabouts a month or more prior to leaving Mr. Edison, which date as we know was April 2, 1895.

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William K. L. Dickson.

Q11. Where was the shop where the above occurrences took place?

A. I can only remember it was a broken down looking place in Franklin Street, New York, the shop, however, seemed to be well equipped.

Q12. Will you describe a little more fully the location of this shop which you say was on Franklin Street?

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A. I am afraid that that is more than my memory will assist me in at this late date, but owing to the circumstances connected with this to me more or less disagreeable business the name of Franklin Street is deeply impressed on my mind.

Q13. Was this in New York City?

A. New York City, yes.

Q14. Can you tell where that street was located with references to some central point say the City Hall?

A. I am afraid I cannot. It certainly was in the lower portion of New York.

Q15. Mr. Lauste has given testimony in this case. Where you present at the time that he gave his deposition?

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A. I was.

Q16. Lauste says that the Latham shop was on Frankfort Street. Was he mistaken in this?

A. Mr. Lauste was quite right. It was certainly Frankfort, now that the matter is brought to me.

Q17. Did you in writing the note at Mr. Otway Latham's dictation attach any date to it?

A. I did, both date and hour.

Q18. Was the date which you wrote that of the day on which the experiment was tried?

A. Yes, about 10 minutes after the short piece had been developed, and in fact the piece of film

was lying on a piece of blotting paper at our side.

Q19. I show you now the sketch Mr. Lauste made at the time of giving his deposition in this case and which is in evidence as Complainant's Exhibit Lauste Sketch. Will you please state in what respects, if any, that sketch illustrates the construction of the feed mechanism of the camera as you saw it on this occasion at the Frankfort Street shop to which you have just testified?

A. The sketch I hold in my hand is undated and purporting to be a sketch made on the Hotel Brevoort letter head, the sketch representing a series of rollers and sprocket wheels and a side sketch of a Maltese cross stop motion. This I was aware had been drawn and put in evidence at the time of Lauste's testimony. The sketch appears substantially to be what I observed at the time but I do not recollect the exact mode of attaching the various sprocket wheels together and presume this was substantially what I saw with the exception of a roller which is drawn on the top of the first sprocket wheel. This I did not see at the midnight test.

Q20. Using this sketch as a matter of convenience, will you please state how the first and fourth, that is the upper and lower sprocket wheels in the taking machine as you saw it at the time of the midnight experiment were driven; that is to say, was their motion intermittent or continuous?

A. I am sorry I cannot help you very much in regard to this for I do not remember the exact method adopted at that time to run these said mentioned first and fourth sprockets. They were, however, working in unison continuously, not intermittently, and presumably belted or geared as shown in the sketch, which is quite likely.

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William K. L. Dickson.

Q21. I did not mean to inquire as to the specific devices for driving them, but only as to the character of their motion, and as to this your answer is what?

A. That the first and fourth sprockets shown in the sketch and as seen by me at that time were running continuously and not intermittently.

Q22. And how was it with the second and third or the two intermediate sprockets, what was the character of their movements?

A. Intermittently running sprocket wheels.

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Q23. Did you make any estimate at the time of the rate at which you operated this camera?

A. Yes, and in fact we had a lively discussion and I think my estimate was accepted, as being perhaps the only one present who could judge, though roughly, of the speed at which the picture was taken, which I estimated, considering how the machine was geared, to be about half the speed at which we ran the Edison kinetograph, which kinetograph was run about 40 to the second.

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Q24. As to the conditions of operation and finish of the machine on the night in question, what have you to say?

A. I am afraid very little, if anything, but I never saw that machine again for some time after I had left Mr. Edison. The machine, however, appeared to be constructed on two uprights with the rollers and sprockets one above the other, the gate or film carrier being centralized between the four rollers, two sprockets above and two below.

Q25. Was the machine on the night when you first operated it in such condition that it could be used practically for the taking of moving pictures?

Objected to as calling for a mere conclusion and indefinite.

A. I felt convinced and somewhat troubled that we had a serious competitor especially so on examining the consecutive views of the filament swaying lamp. I examined the film closely with a lens and found perfect definition, and except for a slight halation due to the intensity of the light filament, but I considered at the time that the machine would answer the purpose for which it was intended.

Q26. You have spoken of assisting in photographing a glove contest on the roof of the Madison Square Garden. Do you remember the names of the contestants in this contest?

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A. I do. Griffo and Barnet.

Q27. Do you remember when this contest took place?

A. Shortly after I left Mr. Edison.

Q28. You do not recall the precise date?

A. I do not.

Q29. What machine did you use for taking these pictures?

A. The same that I tested on the lamp filament.

Q30. You mean the machine you first used at the Frankfort Street shop?

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A. Yes.

Q31. Was the machine when you used it for photographing the Griffo and Barnet fight in the same condition as when you photographed with it the swinging incandescent lamp in the Frankfort Street shop?

A. Yes, but with the exception that I added, or suggested that they should add, a supplementary roller on the upper sprocket wheel. The effect of this roller I judged, would be to allow the film to have a better grip on the teeth of the sprocket

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wheel. In other words, I made this suggestion to obviate any possible tearing out of the perforations, as they were intending to use a very heavy film.

Q32. And this supplementary roller you think was in the machine when you photographed the Griffo and Barnet fight?

A. Yes. This roller I judged necessary and my suggestion was carried out a day or two before the fight, tested and proved efficient.

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Q33. You heard Lauste's testimony on this point and you do not agree with his recollection of it?

Objected to as improper, the witness should simply testify to his own recollection without reference to what Lauste may have said.

A. I recollect his testimony, being present, and would have corrected it at the time but naturally I should have been out of order. The roller was placed on the machine a day or two before the fight.

1368

Q34. Do you recall how much film you used in photographing the Griffo-Barnet fight.

A. Not from recollection as to the specific amount used, but it seemed to me it was a very large and heavy roll, sufficient to take several rounds or bouts.

Q35. Approximately how long was that film if you can state?

A. I am unable to state correctly the length as I did not measure it, but remember it took a very long time to reel it up in the dark room, the reel appearing to be seven or eight inches or perhaps more in diameter.

Q36. How did the width of film used in this machine compare with that manufactured by Edison for use in his kinetoscope?

A. It was considerably wider than the Edison kinetoscope film.

Q37. Have you preserved any specimen of that film and if so will you please produce it?

A. I have. I now hand you a film which I found among my film collection in London purporting to be a piece of film of the Griffio-Barnet fight taken on the roof of Madison Square; size without perforations inch and a half by three quarters of an inch, which I hand in evidence.

Q38. That is to say, the size of the pictures is an inch and a half by three-quarters of an inch?

A. Yes.

Q39. Has this film been trimmed, that is to say, the edge cut off?

A. Yes.

Q40. Did it originally have perforations on each side?

A. Yes.

The piece of film produced by the witness
is offered in evidence and marked Complainant's Exhibit Film of Griffio and Barnet
fight.

1371

Q41. Do you know what became of this taking machine after it was used for photographing this Griffio and Barnet fight?

A. I do not. As I left very shortly after the taking of this picture, not being satisfied with Messrs. Latham methods as far as I was concerned, joining the Mutoscope and Biograph Company of which I became a member. The only explanation

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I can give why these gentlemen testified later in such a vindictive manner was perhaps due to my leaving them high and dry and joining the Biograph Company.

Q42. Have you had any experience in reading the drawings of patents illustrating mechanical devices?

A. Yes.

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Q43. Please look at the patent to Latham which is here in suit and Complainant's Exhibit Latham Drawings which is a full sized reproduction of the original drawing of that patent, and consider particularly Figs. 2 and 6 of that patent, and state, as far as your present recollection will permit, how the taking machine which you used to photograph the swinging incandescent light in the Latham shop on Frankfort Street, and afterwards used to photograph the Griff and Barnet fight, differed from or resembled the machine which is illustrated in the figures to which I have called your attention?

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A. Fig. 2 purports to be a projecting kinetoscope. I cannot say very much about it although I know they were working on something of this order. Fig. 6 is called a projecting kinetoscope. Fig. 6 shows practically what I saw at that date as far as concerns the arrangement of sprockets and rollers illustrating an upper and lower loop, but this illustration 6 is not as I saw it at that time. For some reason or other the teeth are omitted on number 55 and the film did not pass over the roller set so far back as 56. This evidently was drawn sometime after, and the roller 56 which I devised is taken on 46, answering, however, almost the same purpose. In the machine that I tested at the time, the film came straight down. I notice in the

sketch, although indicated, the stop motion is not illustrated except in Figure 5 which naturally belongs to this apparatus of Fig. 6. While called a projecting kinetoscope naturally could also be called a taking machine.

Q44. Do you know what became of that taking machine which you used to photograph the Griffon and Barnet fight?

A. I haven't the remotest idea.

Q45. How long after you left Mr. Edison, April 2, 1895, were you associated in any way or negotiating with Mr. Latham and those interested with him?

A. I do not remember being associated with the Lathams even after leaving Mr. Edison, except in a friendly way to give them a helping hand whenever I could, such as the taking of the Griffon-Barnet fight, for the simple reason that I soon became disgusted with their business methods as previously stated and sought other fields. Had they behaved as gentlemen I most likely should have thrown myself heart and soul into the work, taken up the stock held in trust by my solicitor and joined them in their work. It is fortunate, however, that I did not and therefore authorized my solicitor to return them the stock.

Q46. Did you ever have any conversation with Mr. Woodville Latham after you left Mr. Edison on the subject of moving picture apparatus?

A. Yes.

Q47. What did you find as to the extent of his information on this subject?

A. I found him to be well conversant with the art as far as it went at that time and thought he was capable of originating new ideas and might arrive at some good work outside of what he had

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already accomplished and even then hesitated if I should throw in my lot with him; his personality and that of his sons, however, knocked that on the head.

Answer objected to as incompetent being merely the opinion of the witness as to possible capacity of Latham to produce hypothetical results at some time.

Adjourned to Tuesday, April 11, 1911, at 11
1379 o'clock A. M.

New York, April 11, 1911, 11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

Examination of Mr. Dickson continued:

Q48. How long before you took the pictures of the swinging incandescent lamp in the Frankfort Street shop, had you any knowledge of the camera used on that occasion and what was the extent of that knowledge?

A. I am afraid I cannot be of very much use in giving you any description or exact dates, but to the best of my knowledge I was aware that a taking machine was in process of construction shortly after Christmas, or to be absolutely certain, we might say during the early part of January, 1895.

Q49. How did you obtain this knowledge?

A. I remember calling on Mr. Woodville Latham at the shop in Frankfort Street about that time.

Q50. Did you see this machine in the shop at that time?

A. I did, and Mr. Lauste was busy with same. I could not, of course, nor did I feel it right to examine any of the work, as long as I was not connected with them.

Q51. What kind of a man was Professor Woodville Latham? Please tell us anything that you know about the character of his attainments, ingenuity or the like, that you may have observed during your acquaintance with him?

1382

Objected to as incompetent. The making of a specific invention cannot be proved by evidence as to character and attainments.

A. I found in Mr. Woodville Latham a congenial spirit as stated before, in as far as scientific attainments were concerned. Our discussions were mostly based on general physics and what he himself had accomplished in his life in regard to what he termed "inventions" and various ideas he had. He spoke of different apparatus that he had invented, but, of course, I do not know if there were any patents. It struck me that he was highly theoretical and his anxiety was that I should join forces with him in this particular work he was then engaged on. This, of course, being out of the question, other subjects were more fully discussed and I must say I was much impressed, being perhaps a little younger at that time, with the amount of information he had acquired.

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Q52. Have you known Eugene Lauste for a long time?

A. Yes.

Q53. When did you first know him?

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A. Eugene Lauste worked at Mr. Edison's laboratory for several years as mechanician, engaged in work of precision such as electrical apparatus for Mr. Edison and then left, seeking employment at the Edison Ore Milling Works at Odgen, New Jersey, which he found distasteful and remained out of employment some time. It was at that time that I recommended him as a skilled mechanic to Mr. Woodville Latham, he, Mr. Woodville Latham, not disclosing to me what he wished this mechanic to do for him, as already stated.

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Q54. Do you know whether Lauste, at the time he entered Mr. Woodville Latham's employ, had had any practical experience with moving picture apparatus?

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A. None whatever. In fact, no one was permitted to come within the sanctum sanctorum of the moving picture department. I notice that in Mr. Lauste's testimony he states that he did see the exterior of a kinetoscope and I remember the circumstance very well. I issued a general invitation to everyone in the laboratory to view a scene, perhaps one of the first, if not the first, in a rough box-cabinet shaped kinetoscope, the subject being "horseshoeing."

Q55. Did you ever impart to Mr. Latham directly or through any other source any of the features of construction which you found embodied in his camera when you examined the same at the Frankfort Street shop on the occasion of photographing the swinging incandescent lamp?

A. Decidedly and emphatically, no, neither by word or action.

Q56. Prior to the night when you photographed this swinging incandescent lamp at the Frankfort Street shop, had Mr. Latham ever expressed to you

any satisfaction or dissatisfaction with Lauste's work for him?

A. He expressed himself as being very well satisfied with Mr. Lauste and stated that the work was going on beautifully, or something to that effect.

Q57. What nationality is Lauste?

A. French born, a Parisian.

Q58. Does he speak English fluently?

Mr. Eyre: Objected to as incompetent, and as not the best evidence.

1388

A. No, in fact, it has always been a surprise to me why the English language was so difficult. The only explanation I can give is that his bump of languages must be represented by a cavity.

Q59. Did Mr. Latham ever give you any intimation of whether Lauste was carrying out his, Latham's ideas in the work that he was doing for him?

Mr. Eyre: Objected to as secondary evidence.

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A. Yes, he seemed to be always very pleased and thought that Mr. Lauste was a most capable mechanician and just the man he wanted (to quote his own words) to carry out his ideas.

Direct-examination closed.

Mr. Eyre: In view of the fact that the only apparent purpose for the testimony of this witness, and certainly the main purpose of his testimony is, to make an attempt to prove some early date of alleged invention

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by Latham and in view of the further fact that the only testimony thus far adduced by the complainant, relating to the camera for taking machine to which the witness has referred, has been testimony to the effect that the alleged invention was made by Lauste and not by Latham, the right is reserved to call for the production of the witness for additional cross-examination in case further testimony should be offered tending to show the making of the alleged invention by Latham specially if it tends to show any disclosure of the invention by Latham to this witness; and the testimony of this witness is objected to as irrelevant and immaterial unless such further testimony be adduced.

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Counsel for Complainant replies that he perceives neither the point nor propriety of the above objections and states that all of the facts and knowledge in his possession with regard to the invention of the patent in suit by Latham is now in the possession of counsel for defendant, counsel for defendant having yesterday stated that he had in his posession a copy of the Interference proceedings in the case of Latham vs. Armat. Counsel further states that Woodville Latham, his two sons, Otway and Gray Latham are dead and this fact will be duly proved. If there are any other living witnesses capable of testifying with regard to the making of this invention by Latham, Counsel for Complainant has no knowledge of their whereabouts, although a most diligent search has

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been made to ascertain if there be any such witnesses. Having all the facts before him which counsel for Complainant knows of or believes to be pertinent, counsel for Defendant is at liberty to proceed in the usual course followed in such cases.

Cross-examination de bene esse:

XQ60. In giving the date, April 2nd, 1895, as the date when you left Edison, are you basing your statement upon your personal recollection?

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A. No.

XQ61. What are you basing it on?

A. I have a copy in my possession of my resignation to Thomas A. Edison witnessed by my foreman, who was present at the time, the document reading in the usual form dated April 2nd, 1895, and witnessed; which document I can show, on demand.

XQ62. Did your resignation take effect at once?

A. At once although I had one or two interviews unofficially with Mr. Edison within the next day or two, in order to clear things up which I stated before was done to my and Mr. Edison's entire satisfaction.

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XQ63. You moved your belongings from the Edison Laboratory that same day?

A. Oh, no.

XQ64. How long after?

A. There was no desperate hurry and my belongings were few, if any, with the exception of a few personal photographs that I had taken of my wife, sister, niece, dog, I forget if there was a cat picture; otherwise, I do not think there was anything else. These were removed within the next day or

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two, to my house, at 166 Cleveland Street, Orange, New Jersey.

XQ65. Did you go to the Edison Laboratory at all after the first week of April, 1895?

A. No, but to Mr. Edison's house on one occasion.

XQ66. After April 2nd, 1895, what occupation did you engage in and when did you begin?

A. I joined a small company which I formed with Mr. Llewellyn H. Johnson, which we termed the Portable Electric Light & Power Company.

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XQ67. When was that company first formed?

A. It was more in the order of a partnership between that gentleman and myself, he, the financier, I, the technical adviser. This I acquainted Mr. Edison with and hoped even then if needed, would have his support. About that time however, I met my old friend of early Edisonian days, Mr. H. N. Marvin, and being thoroughly disgusted with the business methods of the Lathams, after taking the Griffon-Barnet fight I threw up both the matters and joined Mr. Marvin in a new moving photographic venture. This took place to the best of my recollection, about two months after I left Mr. Edison.

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Regarding the Portable Electric Light & Power Company so-called, we were more or less dependent upon the Chloride Accumulator Company for a specific kind of plate, which I had designed. Mr. Gibbs, the General Manager, came to my house, at Orange, New Jersey, and that of Mr. Johnson, to arrange for these plates and general contracts. Mr. Johnson was then allowed to carry this on, if he chose, when I joined, as stated before Mr. H. N. Marvin and his associates.

XQ68. My question was only as to when the

Portable Electric Light & Power Company was formed, and I do not think you have told me yet.

A. I did state that it was a partnership more than a company, but for convenience sake, we called ourselves a company.

XQ69. Well, that does not tell me when the partnership which for convenience, was called a company, was formed?

A. I don't know that I can give any exact date. It was certainly within a week or ten days of my leaving Mr. Edison that Mr. Johnson and I arranged this so-called Company.

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XQ70. Before or after?

A. After.

XQ71. What, if you know, has become of Mr. Johnson?

A. I haven't the remotest idea.

XQ72. What was the last that you know?

A. Sometime in that same year, 1895.

XQ73. What was his then location and occupation?

A. Mr. Llewellyn H. Johnson lived in East Orange and was connected with the Bicycle Helical Tube Company.

1401

XQ74. What did you and Mr. Johnson using this company name, intend to do?

A. Portable storage battery lamps for mining purposes and general portable use under a patent which I took out at that time for a parabolic reflector and current controlling device.

XQ75. That was the only business you had in mind for that partnership?

A. That was the only business we had in mind.

XQ76. Just what did the business methods of the Lathams have to do with your deciding to give up this partnership venture with Mr. Johnson?

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A. Neither the business methods, so-called, of the Lathams nor my relations with Mr. Johnson had anything to do with my decision to join an old and trusted friend namely, Mr. H. N. Marvin. I found, as stated before, with regard to the Johnson-Dickson combination, that as we depended almost entirely on very light plates for portable purposes to work in conjunction with my patent lamp we were disappointed that Mr. Gibbs could not produce a sufficiently light plate to give us the capacity required so we were forced to abandon that particular plate and look elsewhere. This took some time and we allowed the matter to drop *pro tem*, until such time as we could find a light plate. Meanwhile, I made several of these lamps which were used with the heavier battery provided by the Chloride Accumulator Company. As for the Lathams, I gave them such help as I deemed necessary, such as taking the same old picture, recited several times in this evidence and as I got to know them better it was quite clear to me that further association with them would be distasteful. Mr. Marvin and Mr. Edmond Congar Brown, my solicitor, were my business confidants and they agreed with me not to go too fast as far as binding myself to the said Lathams, and as stated before, I joined Mr. Marvin as a certainty and I have had nothing to regret since that decision. What has been done with my patent lamp, I do not know, I do not care.

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XQ77. You have stated (answer to XQ67) "About that time, however, I met my old friend of early Edisonian days, Mr. H. N. Marvin, and being thoroughly disgusted with the business methods of the Lathams, after taking the Griffon-Barnet fight, I threw up both the matters and joined Mr. Marvin in a new moving photographic ven-

ture" I judge from your last answer that this quoted statement is not entirely correct or as you intended it.

A. I must confess I do not quite see what you are driving at. I certainly preferred to deal with a remunerative and agreeable business and the offer was such that I considered at the time it was best for me to accept Mr. Marvin's offer.

XQ78. How long did you continue associated with Mr. Marvin's Company?

A. Until the present date. The association still continues, under the heading of K. M. C. D. Syndicate.

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XQ79. What relation, if any, has that company with the Biograph Company or the same company or predecessors under different names?

A. There was naturally no name given just at that time but shortly after we met together with two other friends of Mr. Marvin in Canastota, New York, to dub the syndicate, K. M. C. D. Again shortly after the Mutoscope Company was formed, followed by the title The Mutoscope & Biograph Company.

XQ80. And what is the present name of the concern with which you are connected?

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A. To be more explicit, the K. M. C. D. was the parent syndicate in which we had our various interests allotted. All other companies throughout the world, under the head primarily of the Mutoscope Companies and later of the Mutoscope & Biograph Companies were owned or controlled by the parent K. M. C. D. syndicate.

Recess.

XQ81. When you say that the Portable Electric Light & Power Company was more of a partner-

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ship than a Company, do you mean that there were no company organization papers filed?

A. To the best of my knowledge, that is right. Nothing was filed.

XQ82. What, if anything, occurred after November, 1894, and prior to the time that you saw the pictures of the swinging incandescent lamp affecting the character of your relations, either with Mr. Edison or with the Lathams?

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A. There was nothing that could have affected either my relations with Mr. Edison or with the Lathams, if looked at in the proper light.

XQ83. Did anything occur during that interval which made you feel any differently as to your duties or loyalty in connection with Mr. Edison?

A. Nothing.

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XQ84. I have understood from your testimony that while you were at the Latham shop at times prior to the swinging light episode, you were careful in view of your connection with Mr. Edison, to avoid learning the details of what was being done in the Latham shop, but that at the time of the swinging light episode, you permitted all details of the camera to be shown and explained to you. If I have stated correctly, will you please explain why you were willing to examine this camera, etc. on the later occasion and not willing to learn what was going on on earlier occasions?

A. You have stated this quite correctly and the simple explanation is that the showing of the complete camera was forced on me and it was then or about that time that I was trying to make up my mind if I should go into the exhibition business or not. For that reason, I thought it wise to see what they had.

XQ85. Have you retained in your possession the

letter that Mr. Latham wrote asking you to come over?

A. No, I have not.

XQ86. Did you destroy it and if so, when?

A. When I removed to England from my home in Orange, there was a general clean-up, of course, and presume all useless stuff was destroyed.

XQ87. Do you believe it was destroyed then?

A. Yes.

XQ88. How long had you had it in mind before the time that you saw the swinging incandescent lamp photographed that you might go into the exhibition business?

A. As explained some time back, it was my intention with Mr. Edison's approval, to go into or participate in the exhibition business, Edison manufacturing, Latham to have the right. This, as explained previously, could not be granted, owing to a contract Mr. Edison had made with Messrs. Raff & Gammon; after that I was quite undecided what to do. I did not enter into any agreement with the Lathams.

XQ89. At the time of the swinging lamp episode, you knew that if you should connect yourself with the Lathams, it would be as a competitor to Edison, did you not?

A. Quite so.

XQ90. You were at that time thinking that you might connect yourself with the Lathams, were you not?

A. Yes, though very doubtful.

XQ91. When you say, that because you were at that time trying to make up your mind whether or not you should go into the exhibition business, you therefore thought it wise to see what the Lathams had, you mean, do you not, that you were trying to

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make up your mind whether to go into the business with them?

A. Yes.

XQ92. How long had you been considering going into the business with the Lathams as competitors to Mr. Edison?

A. Hard to tell. Off and on, I suppose, for some months.

XQ93. Probably as early as the time that Mr. Edison declined to make any arrangement with the Lathams?

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A. No.

XQ94. How many visits did you pay to the Lathams' shop prior to the swinging light episode?

A. Difficult to say.

XQ95. For what purpose did you make these visits?

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A. My visits to Mr. Woodville Latham at the shop or at the Bartholdi Hotel or Mr. Woodville Latham's visit to my house were more or less social. In these visits the constant refrain was "Come with us, work with us. I will make your fortune." If the question is leading to, if I gave any instructions or was connected with them in any way as to giving ideas or assisting them, this may be dismissed once and for all, this not being the case.

XQ96. This constant refrain of the Lathams as to your coming with them related to moving picture business all through, did it not?

A. It did.

XQ97. After your first talk with Mr. Edison, suggesting a possible arrangement with the Lathams, when did you next talk with Mr. Edison about what the Lathams were doing?

A. There was no talk with Mr. Edison after that, for quite some time.

XQ98. "For quite some time" is very indefinite. Give me the best idea you can as to how long it was.

A. Possibly about two months or so before I left, in which I told him that we might have a competitor in the Lathams. I think Mr. Edison's answer was a shrug of the shoulders.

XQ99. Prior to April 2nd, 1895, did you tell Mr. Edison anything as to the camera you had seen and the picture of the swinging light?

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A. No, decidedly not.

XQ100. When the Lathams forced you to look at this camera, they knew you were working for Edison. Did they ask you to promise to keep the information secret?

A. No.

XQ101. Who was the individual who accused you to Mr. Edison of having had dishonorable relations with the Lathams?

A. W. E. Gilmore.

XQ102. What was it that he said to Mr. Edison about you, so far as you know?

A. I do not know, except that I had some relation with them, inferring that there was something incorrect in those relations.

1419

XQ103. Why didn't you tell Mr. Edison what you had seen at the Lathams' shop?

A. Had I done so, I think it would have been incorrect. I could only say, as I did, as stated previously, that we may have in these people a competitor.

XQ104. Wasn't it at least a reason for not telling him the fact that you were then thinking you might join the Lathams and it would be to your interest if such event occurred, not to have Edison

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know what had been done in the Lathams' shop any sooner than possible?

A. There is a good deal of truth in what you say but the thought of joining did not occur until some time after. I commenced to realize on the night of the lamp test when I was invited to see that they were seriously engaged, that I might join in the exhibition branch of the business which had been lost sight of by Edison in putting out the kinetoscopes.

1421

XQ105. Do you mean by your last answer that it was some time after the night of the swinging light test that you first thought of joining the Lathams?

A. It was on the night of the test.

XQ106. It was on the night of the test that you first thought of joining the Lathams.

A. I first seriously thought of joining the Lathams.

XQ107. But, you had been thinking of joining them for several months—perhaps less seriously—had you not?

A. No, I cannot say that, if at all, feebly.

1422

XQ108. Your visits to the Latham shop were generally in the evening, were they not?

A. Naturally.

XQ109. When you visited the shop, did you frequently talk to Lauste in French?

A. Occasionally, of course.

XQ110. How large a shop was it?

A. Not very large.

XQ111. Well, give me the best idea you can.

A. I have very little recollection of the size, possibly about 12x15, or maybe more.

XQ112. Was it all one room?

A. There was a small dark room at one end.

XQ113. But there was no separate office?

A. Yes, there was a sleeping room, if I remember right which answered the purpose of, I presume, office, dining room and bedroom.

XQ114. That was where Lauste slept, wasn't it?

A. I believe so.

XQ115. What was the name of the street that was deeply impressed upon your mind?

A. Franklin or Frankfort.

XQ116. You are not sure which, are you?

A. Yes, quite sure, since I was reminded. It was not Franklin but Frankfort.

XQ117. What were the business actions of the Lathams that made you find it impossible or undesirable to make any definite connection with them?

A. In deference to the death of all three parties concerned, namely, Mr. Woodville Latham and his sons, Gray Latham and Otway Latham, I do not think it would be necessary, if you can do without the answer, to push this question further.

XQ118. I am sorry, but under the circumstances of the case, I do not feel like yielding to the reasons you give and must ask you to answer the question.

A. My idea that morals and business should go hand in hand decided me, and as these gentlemen were not leading the sort of life that I was brought up to believe in, it made me feel that the less I had to do with them, the better.

XQ119. Do I understand that your last answer has relation rather to the personal morals of the Lathams than to the business actions about which I asked?

A. I do.

XQ120. Please understand that I have not the

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slightest desire to drag into this case the personal morals of anyone and have not asked you that. In your answer to Q45, you said, that you "soon became disgusted with their business methods." What business methods were there that you became disgusted with?

A. Nothing definite or no definite proposition was made as to our future relations, should I join.

XQ121. You have not answered my question, which asked, what the business methods were that you referred to in your answer to Q45 as having become disgusted with.

A. As stated in my last answer, no definite arrangement as to fees could be reached.

XQ122. And was this the business method that you were referring to as being disgusted with?

A. When I made that answer, it was principally coupled with an answer I made previously which was, as I understand now, not intended to be drawn from me by you.

XQ123. Then so far as the actual business acts of the Lathams were concerned, there was really nothing you were disgusted with?

1428 A. In addition to what I said, I didn't consider that they were businesslike.

XQ124. Didn't they make you any definite proposition with relation to how you would benefit by joining them?

A. I presume you mean in regard to the shares which they endeavored to force on me during my engagement with Edison with the distinct, to me, object of compromising me. This perhaps, may add something towards my meaning "disgusted with their business methods."

XQ125. When did they force this stock upon you?

A. Or tried to—to the best of my recollection, this was shortly after the memorable lamp test.

XQ126. Hadn't you had any previous agreement of any kind with the Lathams or any of them, either written or verbal?

A. None whatever, except the one mentioned in my preamble.

XQ127. Did that agreement set out a definite interest in the business for you?

A. No.

XQ128. Did the letter that you signed at your house in October, 1894, state that it was subject to Mr. Edison's approval?

1430

A. The agreement, if it is desirable to call it so, was contained in two or three lines, to the effect that I would use my best endeavors to persuade Mr. Edison to give them the exclusive rights to use the Edison film for projecting purposes and that should I succeed, I should have a substantial interest from the proceeds of such exhibitions. At that time, there was no thought other than that Mr. Edison should supply these films.

XQ129. Did Mr. Brown hold the stock for you in trust by virtue of any trust agreement or other document which would specify the terms on which it would be delivered to you?

1431

A. None whatever, to my knowledge, unless my legal adviser got them to do something of that kind, pending my decision.

XQ130. He took this stock before you left Edison, did he not?

A. Yes, to hold or to return, as the case might be.

XQ131. And how was that to be decided?

A. As already explained, if I found that the ex-

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hibiting business would pay best, naturally I had the choice.

XQ132. Without your paying anything for it, and without having received any consideration from you, the Lathams had insisted upon giving Mr. Brown this stock in trust for you and you could have it delivered to you at any time you desired. Is that a correct statement?

1433 A. No, quite incorrect. Mr. Brown's object was to hold the stock so as to insure my future the moment I left Mr. Edison. The Lathams' object, however, was to try and force the stock on me, for me to accept same during my sojourn with Edison, presumably to compromise me and force me to join them as quickly as possible. Had I accepted the stock, I should have had to join the Lathams before knowing if the business were good or bad.

XQ133. Which part of my statement is incorrect?

1434 A. I mean that the incorrect part of this relates to my receiving stock without a *quid pro quo*. The stock was to be my remuneration for joining them and as I stated before, they tried to get me to take this stock before I had accomplished anything for them, their object being to get me to leave Mr. Edison forthwith.

XQ134. Didn't you authorize Mr. Brown to hold the stock for you?

A. Yes and rightly too.

XQ135. Then during the following month while Mr. Brown was holding this stock, which you could demand the delivery of at any time you continued working for Mr. Edison undecided whether to take the stock and leave him or whether to direct the return of the stock and stay with him. Have I got that much correct?

A. Quite right.

XQ136. Then when you left Mr. Edison on April 2nd, 1895, how frequently were you at the Lathams' shop?

A. Whenever I thought fit to go to see how they were getting on and to give them such help as was necessary preparatory to the proposed Griffon-Barnet boxing match, which we all thought would give the best test of the capabilities of the machine in question.

XQ137. What, if any use, was made of the Griffon-Barnet film?

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A. Mr. Latham and his sons hired a place on Broadway and used one of the kinetoscope projectors, inviting the public to witness the display.

XQ138. Were you there and saw it?

A. I was.

XQ139. The Griffon-Barnet film that you produced yesterday is a positive taken at some later time, from the negative which you took of the Griffon-Barnet fight. Is that right?

A. Yes.

XQ140. How did you know how fast to turn the handle of the taking machine the night of the swinging lamp experiment?

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A. A piece of blank film was run through several times and the speed of turning the handle was judged in these preliminary tests, but in the tests made with the incandescent lamp the machine was turned by hand. The pictures taken of the Griffon-Barnet fight were run differently; to the best of my recollection, a small motor was attached to the camera and storage batteries used to drive same.

Adjourned to Wednesday, April 12, 1911, 11
a. m.

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William K. L. Dickson.

New York, April 12, 1911, 11 a.m.

Met pursuant to adjournment.

Present—Counsel as before.

Cross-examination of MR. DICKSON continued:

XQ141. What was the kinetoscope projector, such as you referred to in XQ137?

A. Briefly to describe the kinetoscope projector, 1439 in question 137, there was little or no difference between the Edison kinetoscope and what they were using, hence the name, with the exception that the film was considerably wider, the slot in the shutter enlarged as much as possible, so as to retain some degree of sharpness while the film ran continuously from one large spool above the gate to the lower reel. This was the projector which I had an opportunity of running or testing in their Broadway exhibiting place.

XQ142. Was it a peep-hole machine?

A. No.

1440 XQ143. That wasn't the same machine that was known as the eidoloscope, was it?

A. Yes.

XQ144. Did this machine project pictures on a screen?

A. Yes.

XQ145. How large were the pictures?

A. I should judge, to the best of my recollection, the pictures were projected 9 feet by 5, or a little less.

XQ146. Was any use ever made of the swinging light film?

A. None that I know of, unless it was kept as a record.

XQ147. I asked you in a previous question how frequently after April 2nd, 1895, you were at the Lathams' shop, and you said, "Whenever I thought fit to go." Please give me a little more tangible answer.

A. Being more or less undecided as to what I intended to do, and wishing to probe into the possibilities as described to me in such glowing colors, I went as often as I could, to be exact, which I believe, is what you wish to know; might say, to the best of my recollection once or twice a week, and sometimes daily at their exhibit on Broadway.

XQ148. Prior to April 2nd, 1895, and all during the time that you were visiting the Lathams' shop and also visiting Lathams at the Hotel Bartholdi, where were you living?

A. As stated in my preamble, you will find I mentioned 166 Cleveland Street, Orange, New Jersey.

XQ149. And it is your testimony that none of the visits prior to the night of the swinging light episode were made as matters of business, but purely for social purposes?

A. No. In my preamble I clearly stated that it was principally social, but with the object of trying to judge the best thing to do, to join them or not, in the exhibition business.

XQ150. When was it that the subject of photography as a matter of discussion between Latham and yourself was no longer rigidly tabooed?

A. The leading questions naturally placed by Mr. Latham tended always in the direction of

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moving photography, the matter nearest his heart, which to me being dangerous ground, by mutual consent was tabooed as much as possible. The general principles relating to light waves, general photography, as known to all and being common property, were discussed, of course, at length; but, as stated before neither by word or action was anything disclosed or discussed in relation to the work I had in hand for Mr. Edison, nor did I wish to know anything as to the minutiae or detailed construction of what they were doing. It was better so, until I had settled the momentous question of joining them or not.

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XQ151. But my question asked *when* the subject of photography as a matter of discussion between you was no longer "rigidly tabooed"?

A. The one exception to this rule I touched on some time back when we discussed a curious movement that I had noticed in an old clock which Mr. Latham jumped at and tried. This, however, as stated before, might be put down as a slip. The movement, of course, as stated at the time, would be very slow.

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XQ152. Question repeated.

A. I presume you mean when did I feel free to discuss fully moving photography as known in the art, with the exception always, of course, of what was kept sacredly to myself, namely: the work I had been engaged in for Mr. Edison, and would say that this occurred naturally immediately after the 2nd of April, 1895.

XQ153. You have spoken of the differences between the film of the Latham kinetoscope projector and the Edison kinetoscope. Wasn't there an additional difference, namely: that the film of

the Latham device was transparent and that of the Edison kinetoscope opaque?

A. No; that could hardly be so, as a negative is never projected in both the Edison kinetoscope and the so-called Latham projecting kinetoscope positives or positive transparencies were used.

XQ154. In the Edison kinetoscope the observer looked directly upon the positive with a light on the other side of the positive, and the film was sufficiently opaque to prevent the light blinding or confusing the eye of the observer. Is that correct?

A. Not exactly. In the kinetoscope Viewing Machine a small 4 or 5 candle power lamp was used, behind which a parabolic mirror was placed, the rays crossing at a point through a narrow slot in shutter, above which an endless band of positive pictures ran continuously. These pictures were enlarged 2½ diameters by a magnifying glass and the result appearing in a similar manner as an ordinary transparency held up to the light. In the Latham projecting kinetoscope a more powerful light was used in the form of an arc lamp of nearly 3,000 candle power, and concentrated through a short focus condenser on to the picture or transparent positive film, thence through a projecting lens to the screen.

XQ155. Then it is your testimony that the Edison kinetoscope employed a substantially perfectly transparent film?

A. Yes.

XQ156. All through its commercial history?

A. Yes.

XQ157. What was the construction of the "curious stopping device for actuating a clock-

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"work" which you described to Latham, and which he thought would be useful for the work on which he was then engaged?

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A. It might be briefly described as a U-shaped pair of plungers, the ends cut off at right angles coming to a point. These plungers coming against a peg, pushed the peg downwards by a sliding action due to the angle of the plunger. One arm of the U-shaped plunger passing beyond the peg or series of pegs placed at equal distances locked the pegs in position, the second arm of the U-shaped plunger engaging the next peg as the other was released. I think, perhaps a rough sketch may be of some assistance, as I find it rather difficult to describe from memory. The fact is, this movement is too well known and can be found, I think, in any text book on clock mechanism.

XQ158. When you described this mechanism to Latham were you describing a mechanism which was in principle that of one of the feeding mechanisms that had been tried for cameras in Edison's laboratory?

A. No, decidedly not.

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XQ159. None of the Edison cameras that had been tried had employed a feeding mechanism in which a reciprocating member having a surface inclined to the direction of its reciprocation had caused intermittent movement of the film by engaging something connected with the film by the inclined surface?

Mr. Page: Objected to as irrelevant and immaterial, and as an inquiry into matters in no way pertinent to the issues of the present case.

A. None whatever; in fact, it was entirely unfitted for any other purpose but for what it was intended, namely: the slow clock-escapement movement.

XQ160. At the time that you described this device to Latham you knew that he had in mind the making of cameras or projectors with intermittent moving films, did you not?

A. Yes; he so intimated he was going to or was, I forget which.

XQ161. Where were you when this interview took place? 1454

A. To the best of my knowledge at the Hotel Bartholdi.

XQ162. At that time you were familiar with the work thus far done at Edison's laboratory, with cameras having an intermittently moved film, were you not?

Objected to as irrelevant and immaterial.

A. Yes.

XQ163. And by that time had such cameras been used for the commercial work of taking pictures for the Edison kinetoscope? 1455

Same objection.

A. Yes.

XQ164. What was the construction of the feeding mechanism in the camera used in this commercial work?

Same objection.

A. Briefly, a horizontal continuously traveling disk containing one slot adjacent to a vertical

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three-toothed disk, one of the teeth resting on the first mentioned horizontal rotating disk slipped through said mentioned slot, giving an impulse to further mechanism controlling the film on a sprocket wheel. The three-toothed vertical disk was kept in tension in a forward direction while resting one of the teeth on the first mentioned horizontal slotted disk.

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XQ165. Did the intermittently acting mechanism pull directly upon the film on the supply reel without any intermediate devices engaging the film?

A. Yes.

XQ166. This feeding mechanism that you have described was the only one used in cameras for taking pictures for the Edison kinetoscope prior to your leaving Edison, was it?

A. Yes.

XQ167. Do you recall making some experiments with Otway Latham at Columbia College?

A. Yes.

XQ168. Those experiments were made, well, before the end of 1894, were they not?

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A. Yes.

XQ169. What were those experiments?

A. As stated before, the experiment I wished to try was to see if with a powerful arc lamp the kinetoscope could be used for projecting or not, and if so, then I could approach Mr. Edison for the rights of exhibition by projection in accordance with my agreement letter with Mr. Woodville Latham to the effect that I would use my best endeavors to persuade Mr. Edison to give us the right of using his film. We found the experiment, which was made openly, at Columbia College (that being my preference), to be sufficiently encour-

aging for me to keep my agreement. The experiment simply consisted in running an old transparent film through an Edison kinetoscope in the form of a short endless band, the shutter hole being slightly enlarged so that we could get more light through. The picture projected was about 3 feet square. This was done in the presence of some of the Columbia College professors; Mr. Woodville Latham or Mr. Otway Latham, I forget which was present.

XQ170. Do you recall making a sketch or sketches of the stop mechanism or intermittent feeding mechanism for the Lathams?

A. No, I have no recollection and in fact, I can certify most positively that no such sketches were ever made by me at any time prior to my leaving Mr. Edison, unless perhaps I sketched out the clock stop motion already discussed.

XQ171. Can you say positively whether you did or did not sketch out such mechanism and leave the sketch with one of the Lathams or Mr. Lauste?

A. To the best of my recollection, I think it is quite likely that I did, as Mr. Woodville Latham was very anxious to try this device.

XQ172. You did know at the time, then, that Mr. Latham wanted to try this stop mechanism you suggested, in connection with his development of moving picture machines?

A. Yes, for he stated as much, that he wished to try it.

XQ173. Had Mr. Latham, prior to the first of November, 1894, repeatedly shown you drawings of a machine for projecting pictures, having intermittent movement of the film?

A. No.

XQ174. Had he shown you any such drawings at any time in 1894?

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A. To the best of my recollection, he stated that he had many sketches and devices but I positively refused to inspect same for obvious reasons.

XQ175. Was the Columbia College experiment one that lasted more than a single day?

A. It lasted for an hour or an hour and a half, possibly two hours, as we could not take up the time of the professors and attendants. It was only on one day.

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XQ176. Do you know of any experiments made by Woodville Latham in October or September, 1894, in which part of the apparatus employed was furnished by you from the Laboratory of Mr. Edison?

A. None whatever, with the exception of the Columbia College test which I made.

RECESS.

XQ177. Mr. Lauste came to this country to give his testimony in this case at the same time that you did, did he not?

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A. Yes.

XQ178. Was it you who arranged with him over there about coming?

A. No.

XQ179. When did you last see him on the other side?

A. At his house a week before leaving.

XQ180. And when last before that?

A. About a year and a half before.

XQ181. You came over on the same steamer?

A. Yes.

XQ182. You both knew that you were coming over to give testimony with reference to the work in Latham's shop?

A. Yes.

XQ183. And am I to understand that the arrangements for Lauste coming over here had all been made entirely independently of you?

A. Yes.

XQ184. You do not fix the date of February 26, 1895, except by what you have read in a printed copy of Latham's previous testimony, do you?

A. No.

XQ185. Did you ever write a letter to Lauste asking him whether he remembered that you were the one who had suggested the loop in the film of the Latham camera?

A. No, I have no such recollection.

XQ186. Can you say positively that you never wrote such a letter to him?

A. I can.

XQ187. Or any other, asking him whether he remembered your invention of any part of the Latham camera—or something to that general effect?

A. I have no recollection whatever of writing any letter on this subject.

XQ188. In Complainant's Exhibit, Lauste Deposition, I find the following: "XQ136. Well, did Mr. Dickson speak to you about it? A. No; he wrote to me some time ago, and asked me if I remember that he is the inventor of the loop, and I said no, because I made the machine before he came." Can you say positively that there is no basis for this statement?

A. None whatever, I have no recollection of writing any such letter. I remember calling him up on the 'phone prior to going to his house and telling him that there was a case coming on which I learned from Mr. Koopman, also over 'phone,

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that we might have to go out to America to testify as to the Latham inventions, and there was a question of a loop to be testified on.

XQ189. That was just shortly before you started to this country, the end of last month?

A. Yes.

XQ190. Had Lauste already heard of it, did he say?

A. Yes.

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XQ191. In your conversations with Lauste, beginning on that day over the telephone, and up to the time that he gave his testimony, what was said between you as to who had suggested the loop?

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A. Mr. Lauste, in his cabin on board the "Baltic" talked on various things in connection with his old work and also touched on the loop, knowing as he did that that feature of the work seemed to be of importance and explained how he had first thought of it by seeing a loop in a certain book at some time or other, catalogue, I believe he said, of machinery, and that when they were experimenting Mr. Latham was very desirous of preventing the film from tearing and so this loop was added and a general talk of this kind. I wasn't particularly interested in all this. It was my part of the programme to remember what I did, what I saw and so on.

XQ192. The testimony or the extract from testimony given by Lauste, which I read to you, was given in 1898, 13 years ago. Having this in mind, does it aid to refresh your recollection and modify it in any way after your having written such a letter?

A. No, I can only state what I remember and what I see and say to the best of my knowledge

that I have no recollection whatever of writing such a letter.

XQ193. Was the feature of a loop between the exposure window and the supply roll a new one to you when you saw it at the swinging light episode?

A. Yes.

XQ194. Is it true that you told Mr. Lauste before Lauste had met Latham that you had a good situation for him in connection with a machine for projecting pictures and did you then give him a letter of introduction to Mr. Latham?

A. Part right, part wrong. I gave Mr. Lauste a letter of introduction to Mr. Woodville Latham, not knowing or having the slightest clue that Mr. Latham was going into competition which on the face of it would have been to jeopardize my own interests. It was after I had given this introduction that Mr. Woodville Latham, in an interview, said that he had some good ideas in moving photography which he wished carried out. No mention was made in my letter of introduction as can plainly be seen, in regard to what class of work Mr. Latham wanted Mr. Lauste to do.

XQ195. At the time you gave the letter to Lauste, did you know that the younger Lathams were engaged in business in connection with the employment of Edison kinetoscopes?

A. I knew the young Lathams had six or more machines on exhibition somewhere in New York and if I remember correctly, I simply inferred that they wished a good mechanic to look after and keep their machines in running order.

XQ196. Do you recall anything as to what the book was that you were using in the Edison Lab-

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oratory and that Lauste referred to as being one that contained a showing of this loop?

A. I am afraid I cannot help you as I do not remember the book.

XQ197. Do you recall whether Lauste ever came to you while you were still with Edison to get what ideas you had for these moving picture machines?

A. I do.

XQ198. State the circumstances, please.

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A. Mr. Lauste came over from New York unsolicited by me and told me he was instructed by Mr. Woodville Latham to see if I would help them in regard to some difficulty or something or other, presumably a stop motion of some kind. I remember distinctly and wish it quite clearly understood that in keeping with all I did at the time, I pointed out to Mr. Lauste that I could give him no assistance whatever in the art until I had made up my mind to join forces with them.

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XQ199. Do you remember whether before the time of the swinging light pictures you many times told Lauste that you didn't like coming to the shop because it was compromising to you and that when you would leave Edison it would be all right, that you would come every day but until then you could not do it?

A. Quite right. I remember every word of it.

XQ200. How long was that before the day when you told Mr. Edison that he would have to choose between Gilmore and yourself and upon his refusing to discharge Gilmore, the handing in of your resignation?

A. I haven't the remotest idea. What I said to Lauste did occur as stated, but when it occurred, I do not remember.

XQ201. Did the film pass upward or downward

in the machine that took the swinging light photographs?

A. Downward.

XQ202. Did you know E. W. Kleinert?

A. Yes, I saw a man by that name at the Latham shop.

XQ203. Do you know anything about what has become of him?

A. No.

XQ204. Did you take a picture or help to take a picture with the same camera on the roof of the Scott building after the swinging light episode and before the picture of the Griffo-Barnet fight?

A. No.

XQ205. Do you recollect a conference in New York between Otway Latham, yourself, your wife, Mr. Edmond Congar Brown and Mr. John Murray Mitchell?

A. I do.

XQ206. State the time when this conference occurred and also state what occurred at the conference.

A. I have no recollection of the date of conference but I remember it was in regard to the same old thing, to join or not to join and also in relation to, that if I would join them, I should have a certain amount of stock allotted to me. I think that was the purpose of the conference in question, but as for the stock, this stock was never transferred to me nor have I to this day seen a share certificate and it was only the other day that Mr. Lauste handed me for my inspection a share certificate under the heading of the Lamda Company.

XQ207. Wasn't it at this conference that it was agreed among all of you that a quarter of the stock of the Lamda Company be assigned to Mr.

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Brown because you did not wish to make a contract in your name and so place yourself that the propriety of your actions might be questioned?

A. No. The stock at Mr. Edmond Congar Brown's suggestion, should be put in his name, for the sole reason that he wished to safeguard my interests in case I should join them, the business proving satisfactory. I know very little more about this, but I have no doubt Mr. Edmond Congar Brown could give you all the information you require.

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XQ208. You gave Mr. Brown a power of attorney to act for you in these matters, did you not?

A. I do not remember giving Mr. Brown a power of attorney. Mr. Brown was my legal adviser in many other matters and did this, if I remember right, as a friend.

XQ209. What was the object of having legal advisers for both sides present at this conference, if its only purpose was to discuss the advisability of your making a connection with Latham?

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A. I give it up, presumably, however, to come to some definite understanding that if I did leave, I should be provided for.

XQ210. I understand that before the supplementary roller on the upper sprocket wheel which you suggested was added, the film came straight down. Is this supplementary roller shown on the sketch Lauste made in this case?

A. Yes.

XQ211. It is the uppermost roller of the sketch, is it?

A. Yes.

XQ212. And before this, the film was only engaged by one tooth on the upper sprocket, is that right?

A. One or two teeth.

XQ213. And that put too much strain on these perforations and frequently resulted in tearing the films?

A. I remember running through a long piece of negative film, a few days prior to the Griffon-Barnet fight and it seemed to run very satisfactorily until there would be a little slack. When this was taken up a slight jerk would take place and on examination, I noticed a roughness in one or two of the perforations. This, however, did not depreciate in any way that I could see, the results. I, however, thought it advisable when trying this experiment over again, while placing my thumb further along towards the upper center of the sprocket wheel to place at this particular point a roller of rubber or some other soft material, I do not just remember which, grooved out on the sides to allow the sprocket teeth to enter. The result of this roller was simply to add a few more teeth as an additional precaution against any possible danger of roughness on the edge of the film perforation. I don't know if this was absolutely essential but it had its use.

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XQ214. What do you know as to Latham's financial condition during the period about which you have testified?

A. I am afraid very little. I believe he found someone to join him in financing his work. This was a matter I had nothing to do with.

XQ215. The discussions between you relative to your joining the Lathams, did not bring out any expectations on Latham's part that you would financially contribute to the enterprise, did they?

A. No.

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XQ216. Did you and Latham ever discuss patenting the camera which you saw?

A. No, not to my recollection.

XQ217. Is there any other error that you can perceive in Lauste's sketch as a correct showing of the mechanism of the camera as it existed when it took the swinging light pictures, except the presence of the additional roller that you had suggested and the different path of the film produced thereby?

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A. The sketch handed me looks all right. The only thing I do not remember about it is just how the upper or No. 1 and No. 4 continuous running sprockets were joined together. I know, however, that these two sprockets ran together and No. 2 and No. 3 sprockets were also joined, presumably as shown. I think on the whole that the sketch is quite what I saw at that time.

XQ218. What do the letters K. M. C. D. in the name of your syndicate indicate?

A. The letters K. M. C. D. indicate E. B. Koopman, H. N. Marvin, Herman Casler and W. K. L. Dickson.

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XQ219. At the time of the testimony in Latham vs. Casler vs. Armat, were you familiar with the fact that there was an interference pending and in a general way, the character of the invention involved therein?

A. I was aware that this case was going on in America but knew little or nothing what it was all about.

XQ220. What was the untenable proposition which Mr. Woodville Latham and his sons made to you in the presence of your wife at your house in Orange?

A. That I should that day leave Mr. Edison and

work with them in developing a taking machine on the lines of the Edison so-called kinetograph, not that I really think that Mr. Woodville Latham, to do him justice, wished me to divulge anything I had been doing for Mr. Edison but wished to have an apparatus under their control that they could make films for exhibition purposes. It was modified, of course, to what I have already stated, and in fact, it was the only thing to be done, namely, to get Mr. Edison to supply these films for this particular exhibition purposes.

XQ221. Please state all that you can remember that was contained in the letter which you received, and as a result of which you visited the shop and photographed the swinging light?

A. I cannot bind myself to the exact wording but the sense of the letter was to the effect that I should come at once, as they believed they had something fine and I must see it. It was a jubilant epistle and so I went.

XQ222. Didn't the letter mention that it was a camera they wanted to show you?

A. I do not think so. I do not think there was any description. I naturally knew or inferred that it was the camera; as stated before I was aware that they were working on such a devicee, although I had never seen it in detail. In fact, I purposely kept away at one of the visits from looking at the construction. Upon that evening, however, the whole thing was explained and shown me.

XQ223. Didn't you go over expecting to be shown a camera?

A. Naturally. The purport of the letter indicated that they wished to show me something fine or good, whatever the words were.

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*William K. L. Dickson.*New York, April 14, 1911,
10.30 A. M.

Met pursuant to adjournment.
Present: Counsel as before.

Cross-examination of MR. DICKSON continued:

XQ224. Did you ask the Lathams or any of them to choose the location for a shop as near as practicable to the ferry connecting with the trains for Orange or something to that effect?

1493 A. No, decidedly not. This was proposed to me by Mr. Woodville Latham as being more convenient for me to come over and see their work and help them. This, of course, is another of those garbled and vindictive statements made in the testimony of that gentleman and which I am here to confute whenever I can.

XQ225. Before the night of the swinging light, did you see any efforts made to project pictures with a machine of the same general character as the machine used to take the pictures of the swinging light or with that same machine at the Frankfort Street shop?

A. No.

1494 XQ226. Did you supply any film for that purpose or for any purpose in January or February, 1895, to the Lathams or anyone connected with them?

A. No, decidedly not.

XQ227. Did you find Otway Latham and Gray Latham or either of them skilled as mechanics?

A. No, but Mr. Otway appeared to be very handy.

XQ228. When you visited the Latham shop be-

fore the night of the swinging light pictures, was it quite a frequent occurrence that Mr. Woodville Latham would not be there?

A. As I went purely and alone on Mr. Woodville Latham's invitation, with possibly occasional invitations from Otway Latham, I would find the inviters always there, except on the night of the lamp test when Mr. Woodville Latham was ill, or indisposed.

XQ229. At the time of these various visits, do you know whether Mr. Otway Latham knew you were working with Mr. Edison upon photographic machines?

A. Decidedly, since he and his people bought kinetoscopes which they had on exhibition somewhere in the city.

XQ230. On April 2nd, 1895, did you consider Latham obligated to you in any way?

A. No, not in any way.

XQ231. How about any earlier period than that?

A. The same answer applies as naturally I could not charge them for erecting the Edison kinetoscopes at their exhibit as I was paid to do this by Edison.

XQ232. Did you meet Gray Latham and Otway Latham or either of them at any time at the Laboratory of Mr. Edison?

A. Yes, in the early part of 1894, they came to Mr. Edison's Laboratory to purchase some kinetoscopes for exhibition purposes. It was then that I met them for the first time and possibly three times after that during this deal.

XQ233. Did you ever tell either Gray Latham or Otway Latham at Edison's Laboratory that you

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were the real inventor of the kinetoscope, having suggested the idea to Edison?

A. To the best of my recollection, I hardly think even if I had been the inventor, so-called, would it have been policy to have made such a statement to utter strangers. I am confident, however, that this is another spiteful dab.

XQ234. Are you positive in your recollection that there is no basis whatever for any such statement as this?

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A. I can state emphatically that I have not the slightest recollection of any such conversation.

XQ235. Can you swear positively that you did not make any statement of this character to either of the Lathams at the Edison Laboratory?

Mr. Page: Objected to as irrelevant and immaterial, as, if the witness is testifying to the best of his recollection, it is quite immaterial how he answers this question.

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A. As stated before, I have no recollection of making such a statement, and I am inclined to believe, to the best of my knowledge, the conversation did not take place or was turned and twisted for a purpose.

XQ236. You do recollect, however, do you not, that at the Edison Laboratory, you did express to one of the Lathams your displeasure at not having received the credit due you for the work in moving picture lines you had done with Edison?

A. This question is in keeping with the last and tends to show that there was some hidden object in making these various statements. I again, will most emphatically state that I have no recollection of such conversations especially with men that I knew nothing about.

XQ237. Do you remember whether or not in your conversation with Gray or Otway Latham at the Edison Laboratory you suggested or intimated that an association with them in the kinetoscope business would be more pleasing to you than association with Edison?

A. I think on the face of it, this would be utterly absurd, considering the number of years I had been so delightfully associated with Mr. Edison and that my work was so highly congenial to me in every respect. I was head of the electrical mining department as well as the head of the kinetoscopic and kinetographic moving picture department and this should be answer enough to show the ridiculous and I again use the word, vindictive nature of the series of statements.

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XQ238. Do you remember that Otway Latham and Gray Latham asked you if you would be willing to join with them in their work and that after some hesitation you agreed that you would talk the matter over with your wife and give a definite answer at a later time?

A. Quite right. This, however, has been explained in previous answers and questions.

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XQ239. Did you see any 1894 or 1895 drawings made by Lauste for cameras or projecting machines or parts thereof?

A. I saw several sketches lying around on table and bench, but was particularly careful not to inspect same, for obvious reasons.

XQ240. The reasons may be "obvious," but in all this deposition, I have been unable to find anything that explains why your reasons for not examining these drawings and apparatus in process of construction did not equally apply to prevent you when you received a letter from Otway Latham

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William K. L. Dickson.

from which you understood that a moving picture camera had been completed, ready for your inspection, from visiting the shop and obtaining the exact information as to that camera. Do you desire to explain any further?

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Counsel for complainant suggests that this may be due to a lack of perception on the part of Defendant's Counsel and not such an inference as others might draw from the testimony and therefore objects to all but the interrogative portion of the question as irrelevant and immaterial.

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A. The matter is as simple as A B C, and I have endeavored throughout this testimony to various answers and questions to show that I was particularly careful as long as I was not associated with the Lathams, as a matter of honor, to probe and unduly examine into their work. The same thing applied to the fact that I was scrupulously careful not to divulge anything that was going on at Mr. Edison's laboratory and it was not until I was invited to see the completed camera on the night of the swinging lamp test that I commenced to see the possibility of joining the Lathams which even then was most uncertain. Although this machine was thoroughly explained and examined by me, I felt that even if I did not join I could, of course, not take any advantage of what I had seen. In conclusion, would add, as stated before, that this was forced on me.

XQ241. In your answer to XQ164 you described the feeding mechanism of the camera used in the commercial work for producing pictures for the Edison kinetoscope. Was the horizontal continu-

ous travelling disc you speak of arranged like the disc 25 of the Edison Patent 12,037, except that it had one slot instead of six and was the vertical three toothed disc arranged like the disc 23 of that patent with relation thereto except that it had three teeth instead of six?

Mr. Page: Objected to as irrelevant and immaterial and as fishing for information, no way pertinent to the questions involved in this case.

A. My explanation or description as given in my answer 164 is purely from memory, some 22 years ago, was broadly a description of the action of such a machine. What I described doubtless was sufficiently correct for the purpose and perhaps one of the modifications we made at that time. The patent drawing entitled "T. A. Edison Kinetoscope No. 12,037" shows such a modification and looks quite correct; showing more teeth on the vertical disc with a corresponding additional number of slots, in the traveling horizontal disc. The terms horizontal and vertical do not as closely apply to this drawing as in my rough description from memory, although the action is the same.

XQ242. How long a film was used in the Edison kinetoscope?

A. In the first models, there was about between 25 and 30 feet and later 48 feet.

XQ243. 48 feet was the longest length of film used on the commercial kinetoscope?

A. Yes.

XQ244. And was the same length or a lesser length used on the camera when taking pictures for the kinetoscope?

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William K. L. Dickson.

Mr. Page: The objection heretofore made to Counsel for Defendant using this case as a fishing excursion for information in no way necessary or relevant to the issues is objected to as a gross abuse of the privileges of cross-examination.

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A. It depended somewhat on the subject and on some occasions two 24 foot lengths were used on several subjects and sometimes three subjects photographed and joined together to make up the required length averaging about 48 feet on the last models, or when the occasion required, a complete 48 length was used in the taking camera developed, printed, and the positive placed in the kinetoscope in the form of an endless band.

XQ245. How did the thickness of the film used in the kinetoscope compare with the thickness of the film used in kinetoscope projectors,—if you can, state the thickness of each.

Mr. Page: Same objection.

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A. I am afraid this is rather too much of a task. My distinct remembrance, however, is that the film used in the camera was extremely thin, almost like paper but very tough. The positive, if I remember well, was somewhat thicker as used in the Edison kinetoscope. I had the pleasure of handing in a sample of the Griff-Barnet positive film used by the Lathams in their projecting machine and I think that both the slow emulsion positive films used in the Edison kinetoscope and in the so-called Latham kinetoscope projector, were very much alike as to thickness.

XQ246. And as I understand you, the film used

in the camera was much thinner, that is, the Edison camera. Is that right?

A. Somewhat thinner, yes.

XQ247. Two thousandths of an inch thick or thinner?

A. I give it up, too difficult to remember such exact measurements after so many years. For that reason I made my answer comparative.

XQ248. How did the color of the film used in the Latham camera compare with that of Edison camera?

A. In your question, I presume you mean the unexposed film. Nearly all film used from that time to the present has a creamy delicately tinted greenish appearance.

XQ249. Has all the unexposed film from the beginning been of that color, do you know?

A. Yes.

Cross-examination closed.

Re-direct Examination by Mr. Page:

RDQ250. Have you any pecuniary interest in the outcome of this suit? 1515

A. None whatever.

Re-cross Examination by Mr. Eyre:

RXQ251. Do you hold stock in the K. M. C. D. Syndicate?

A. I do not think it can be called holding stock. I have an interest or had an interest in this K. M. C. D. Syndicate, but having disposed of my holdings in all the subsidiary companies, including the American Biograph & Mutoscope Company, my interest therefore in the K. M. C. D. would naturally come to an end.

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William K. L. Dickson.

RXQ252. Is the K. M. C. D. Syndicate an incorporated company?

A. No, it is still an agreement of partnership.

RXQ253. Do you mean that your present interest in the K. M. C. D. Syndicate is one of no value whatever?

A. Yes, unfortunately.

RXQ254. The K. M. C. D. Syndicate owns nothing of any kind, is that it?

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A. For many years past, I have received nothing from the K. M. C. D. and with the exception of the K. M. C. D. Syndicate holding one or two side lines, which in fact do not know exactly what they are, anyway, nothing seems to have come of the side lines, I later, as stated before, sold out my shares in any company or companies which should have paid interest in a certain proportion to this quarter partnership, hence my explanation that if I held no shares, there could be no division of interest as far as I was concerned.

RXQ255. How recently did you sell out?

A. About three years ago or maybe more, I sold out my last holding, namely, the American Mutoscope & Biograph Company shares.

RXQ256. What arrangements were made with you as to coming over here to give this testimony?

A. A fee of £300, out of which I should pay my own expenses.

Deposition Closed.

W. K. L. DICKSON.

New York, April 25, 1911, 11 a. m.

Met pursuant to adjournment.
Present: Counsel as before.

WOODVILLE LATHAM, a witness called on behalf of the complainant, having been first duly sworn, deposes in answer to interrogatories by complainant's counsel as follows:

Q1. Please state your name, age, residence and occupation?

A. Woodville Latham, 74 years of age, no occupation, residence 227 West 116th Street, New York.

Q2. Are you the patentee of U. S. patent 707,934, which is involved in this suit?

A. I am.

Q3. When the application for that patent was pending in the Patent Office, was it involved in interference?

A. My memory is not clear in that respect. My impression is that an interference was declared between myself and Mr. Armat and Mr. Casler and I was going on to say that it related to a projecting machine that did not include a stop movement, but since I began to answer the question I remember that the arresting device machine was the one that the interference was declared on.

Q4. Do you recall testifying as a witness in that interference?

A. Very well, sir.

Q5. I hand you a volume, entitled "Transcript of Record Court of Appeals, District of Columbia, Woodville Latham vs. Thomas Armat, Appeal from

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the Commissioner of Patents." Are the two depositions of Woodville Latham in that record the depositions you gave in that case, as you now recall?

A. Yes, they are.

Q6. In this record there are also depositions of Otway Latham and Gray Latham. Who were Otway Latham and Gray Latham?

A. They were my sons.

Q7. Are either of these sons of yours now living?

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A. No, sir.

Complainant's Counsel offers in evidence the two depositions of Woodville Latham and the depositions of Otway Latham and Gray Latham, referred to in the preceding questions, and the same are marked "Complainant's Exhibit Latham Depositions in Armat Interference."

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Defendant's Counsel objects to the introduction of these depositions of Otway Latham and Gray Latham as incompetent evidence in this case, entirely out of place. The depositions being given in interference proceedings entirely foreign to this suit, and the present defendant not having had any interest in said interference or an opportunity for cross-examination.

The depositions of Woodville Latham and the testimony now about to be given by the said Woodville Latham are objected to as improper rebuttal testimony, and notice is hereby given that at the proper time a motion will be made to the Court to strike these depositions from the record. It is

agreed that this objection to the present testimony of Woodville Latham will stand as to his whole testimony.

Q8. Mr. Latham, were you ever interested or engaged in the manufacture or exhibition of pictures of moving objects now commonly known as moving pictures?

A. Certainly.

Q9. When did you first become interested in such business?

A. As a matter of money-making business, I became interested in the Fall of 1894 and January of 1895.

Q10. Did you have at that time any factory or shop for the manufacture of moving picture apparatus?

A. Yes, I did.

Q11. Where was that shop?

A. In a building on Frankfort Street, not far from the Sun and World buildings. My recollection is it was called the Scott building, and my recollection also is that its number was 35.

Q12. What assistants did you have in this shop on Frankfort Street in the latter part of 1894 and the early part of 1895?

A. I had a French mechanic by the name of Lauste and with him were employed one or more assistants.

Q13. Do you remember the names of the assistants?

A. I do not; and, upon reflection, I am not absolutely sure that it was there rather than at a place we occupied later that Lauste felt the need of assistants and requested me to employ them for him. They were young men, not mechanics, helpers, I suppose, would be a better term to use.

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Woodville Latham.

Q14. Did you ever have in your employ a mechanic by the name of Emil W. Kleinert?

A. I did.

Q15. Do you remember when he first came to work for you?

A. Not very clearly. The date of his employment, of course, has escaped me, and I do not even remember at this moment whether he was employed when we were in the Frankfort Street shop or in another shop on Beekman Street, which we occupied a little later.

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Q16. Were any machines made in your shop on Frankfort Street for either projecting or for taking moving pictures?

A. Yes, sir.

Q17. Will you state what those machines were and for what purpose they were made?

A. Except mere temporary appliances for experimental purposes which were made from time to time, there was only one machine that I can recollect, and that was a machine suitable for use as a camera or as a projecting machine.

1530 Q18. Do you know when that machine was built and finished?

A. I think I shall have to make an explanation before answering that question. That word "finished" may mean in the mind of the questioner one thing or another. In the Frankfort shop the machine was so far finished that, as a matter of fact, a moving picture was photographed, and, as a matter of fact, a good many projections were made with it. We used at that time for projecting Mr. Edison's film, small pieces of which we had been able to get somehow—I do not remember just how—except we did not steal them. Of course, guides and the window opening had to be made of a size

to suit Mr. Edison's film, and that part of the machine at that time—I mean in the Frankfort shop—I regarded as temporary, because very early I had determined to project on the screen larger pictures, so that I would be enabled to use less strong objectives to get a picture on the screen of a given size.

Q19. Do you recall, or have you any memorandum, to fix the date when that machine was first used for taking photographs of a moving object?

A. I have a memorandum.

Q20. And what is that memorandum?

A. I and my two sons, Gray and Otway Latham, had two rooms in the Bartholdi Hotel, a large room and an adjoining, not connecting smaller room. I occupied the small room, usually retired early, and got up early and at the time I am going to speak of I had been for some days physically indisposed. Otherwise I should have been present in the shop to witness the experiment. The experiment was made by my son Otway Latham, whom, from the beginning, I had made shop manager, and Mr. William K. L. Dickson. At 5 o'clock on the morning of February 27, 1895, I found lying on the floor just inside of my door this note from my son, Otway Latham: "Experiment most successful. We took a picture. Machine is very fine. Works beautifully. Don't wake us up, as we did not reach the room until 3 a. m. (Signed) Otway."

Immediately I made this memorandum at the bottom of the beforementioned note: "Slipped under my door at 3 a. m., February 27, '95, and got by me at 5:30 a. m. (Signed) W. L."

I also received at the same time a note of congratulation from Mr. William K. L. Dickson. What has become of that note I don't know.

Complainant's Counsel offers in evidence the note and memorandum produced by the witness, and the same is marked "Complainant's Exhibit, Otway Latham Note of Experiment."

Q21. In whose handwriting is the blue pencil portion of this note?

A. In the handwriting of my son, Otway Latham.

1535 Q22. Where has this memorandum been since you found it in your room at the Bartholdi Hotel?

A. It has been in my possession continuously ever since.

Q23. Can you describe from memory the construction of that machine which was used on the occasion referred to?

A. I am going to try to do it, and now, as I see it in the air, I see a reel loaded with some film. I see that film passed over a sprocket wheel. The film has holes in it along the edges to fit the sprockets, so that the revolution of the sprocket wheel away from the reel would draw the film from the reel.

1536 Now, that sprocket in the machine I am trying to describe, turns continuously away from the reel and continuously, while the machine is in proper operation, unwinds the film from the reel. Some distance below the sprocket wheel I have just mentioned, vertically below it, is another sprocket wheel of exactly the same size, that is, the two wheels are as nearly the same size as my mechanics could make them. Now, suppose that were all of the machine and that a waste basket were on the floor in a vertical line under these two sprockets, and enough film had been withdrawn from the reel to wrap partially around the

upper sprocket and to pass vertically down and then to pass partly around the lower sprocket, and that you had two smoothers—idlers, the mechanics call them—pressing on the film at the place where the film is in contact with the sprocket wheels, for no other purpose than to keep the film on the two sprocket wheels. Now, suppose I had a crank attached to the lower sprocket wheel, I will say, and suppose the two sprocket wheel shafts were connected so that one could not revolve without causing the revolution of the other at the same rate—now remember that, according to the supposition, the film is taut between the two sprocket wheels, and if, therefore, we turn the crank it will remain so, provided the mechanical work has been properly done. Suppose I had a pinching device of some kind that I could apply to this portion of the film between the two sprockets and were to apply it strongly while someone is turning the crank, the strip would be instantly broken.

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Suppose we go back and we bring the film into contact with the upper sprocket wheel and with the lower sprocket wheel also in the way already described, except in this case the strip between the two sprockets is not taut. In other words, a loop is left in the film between the sprockets. Now, if we again turn the crank, this loop will remain of just the length that it had in the beginning, provided the mechanical work has been properly done. Suppose, now, that I have an arrangement having disconnected the two sprocket wheels by which I can move and stop the lower sprocket wheel at intervals, and suppose I, in beginning another experiment, bring the film over the two sprocket wheels and arrest the lower sprocket wheel long enough for the continuously revolving upper

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sprocket wheel to make a loop of suitable length. Suppose, then, I start the lower sprocket wheel; as long as the lower sprocket wheel is running that loop would be maintained, of course, and if I again were to start the lower wheel, my loop would be enlarged. Suppose I geared together the two sprocket wheels once more, and suppose I have below the upper sprocket wheel a third sprocket wheel, and above the original lower sprocket wheel I have a fourth sprocket wheel, and suppose in threading the film I proceed as follows (of course, these two new sprocket wheels have pressing rollers like the original sprocket wheels); now, then,

I will start at the reel, pass the film over the first sprocket on to the second sprocket, but I will leave a loop between the two; then I will pass it taut to the third sprocket, and from the third to the fourth sprocket with a loop of exactly the same size as the loop already mentioned between the two. Suppose these two sprocket wheels No. 2 and No. 3 are geared together and can be made to move or stop at regular intervals, and that the two outer sprocket wheels, No. 1 and No. 4, are geared together and move continuously at the same rate,

and suppose for a moment that the sprocket wheels No. 2 and No. 3 also move, the effect of sprocket wheel No. 4 is, first, to take up the lower loop and any more of the films that may in the time be fed to it from sprocket wheel No. 2. Bear in mind the sprocket wheel No. 2 furnished first downward so much of the film as made the upper loop; suppose at the instant when the lower loop has been taken up by sprocket wheel No. 4 and the upper loop has passed down to take its place; now what we have before us is the film running taut from the reel to the upper sprocket, to sprocket No. 2, down to sprocket No. 3. Suppose between sprocket No. 2

and sprocket No. 3 I have a window for the light to pass from the lamp through the lenses, the picture strip, to the screen, and that the window is open. A projection is made or a photograph is taken, depending upon the purpose for which you are using the machine. Suppose, now, I permit sprocket wheels 2 and 3 to revolve again. Of course 1 and 4 are revolving all the time, and suppose that just at the instant of the beginning of the movement of the strip this window is closed, and suppose that the movement is permitted only so long as to bring into the optical axis in front of the window exactly enough of the film for a picture to join the picture just now projected or taken. Suppose the window now to be opened. Obviously a second picture will be photographed or projected, as the case may be. By repeating this process, and with an arrangement for making these startings and stoppings and openings and closing automatic; and if, further, to avoid the chance of having the film pucker or get twisted at the window, it is made to pass at the window between two frames, velvet lined or otherwise, the openings in these frames being precisely of the size of the picture I am attempting to photograph or project. Suppose I have a means by which I can make these plates press against one another to a greater or lesser extent. Then you have before you an idea of the machine I mean.

Q24. Whose idea or conception was this machine?

A. I never in my life ran a reel press or a boring machine or a planer or any other of the machines that must be employed in making apparatus of this sort and necessarily when the idea came into my head just as much as it was in my head just now when I was trying to explain it to

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Woodville Latham.

you, it was necessary for me to get the help of skilled mechanics.

Q25. Do you remember whether this machine which you have described was constructed so that the film moved upward or downward?

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A. I do not, sir. I did not at that time regard it as material which way it ran, but a long time afterwards when we were exhibiting to the public picture strips of great length I observed in my own case, especially when I had become a little tired, a tendency to drop my eyes and it occurred to me that probably other people were like me and that a downward running film could be looked at comfortably for a longer time. I do not mean from the time 7 o'clock to the time 8 o'clock rather than to the time from 7 to half past 7 but within the extremely small fraction of a second during which a picture was visible when it was being projected by a continuously running machine. I think there is absolutely no difference in the effect produced upon the eye between a downward running film and an upward running film in a machine that includes an arresting device.

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Q26. Do you recall the first time when you saw this particular machine that was experimented with by your son Otway and W. K. L. Dickson on February 26th or February 27th, 1895, used for the taking of pictures of objects in motion?

A. We had moved our shop to very much larger quarters, that is, to 101 Beekman Street, than we had had in Frankfort Street but we had in the Beekman Street shop a great deal of machinery so that even small experimentations in the way of projecting could not be made in the shop but we were on one of the upper floors, I think the floor next to the top one. The building had a large

flat roof and we took the machine to that roof to see how it would behave in photographing moving objects. I was present and as it proved afterwards, I was photographed though I had not intended to be. In front of the camera were my son, Gray Latham, Mr. Lauste, Mr. Lauste's son, a boy and Mr. Kleinert. My son Otway operated the machine.

Q27. Have you any recollection now how long a time elapsed after February 27th that these pictures were taken on the roof of the Frankfort Street building?

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A. I do not recollect. Not a great while, however. Some delays were necessary in order to secure two suitable men to box with one another. And I have a indistinct recollection that a punching machine that we had for punching the holes along the edges of the picture strip was inefficient on some account and that part of the delay was due to correcting the defect in punching machine for making or having made another one.

Q28. I hand you what purports to be an enlargement of one of the pictures of a film which is in evidence as one of the Complainant's Exhibits and marked "Lauste Exhibit Photograph." Do you know what that represents?

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A. That represents one of the pictures of a considerable series of pictures,—moving pictures, that is—that I have just referred to as having been taken on the roof of 101 Beekman Street. Please understand me not as swearing positively that this picture was taken on the roof of 101 Beekman Street. It may have been taken on the roof of the Scott Building on Frankfort Street. If the latter were the truth it was only shortly afterwards that we obtained the new and larger quarters on Beekman Street and this great distance in time

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Woodville Latham.

and with my mind meanwhile concerned with totally different matters, it would be surprising if I could speak very positively about the matters referred to. At this minute I remember that the likeness of Mr. Wiet does not appear in this picture and it would have appeared if Mr. Weit had then been in my employ. He was not in my employ when I was on Frankfort Street and I am rather inclined now to believe it was on the Frankfort Street roof this picture was taken.

1553 Q29. Was this taking machine that you have said was tested on February 26th or February 27th, 1895, afterwards used by you or under your directions for the production of moving picture films, and if so, to what extent?

A. Yes, almost exclusively, if not quite so.

Q30. For how long a period of time?

A. During my entire connection with one or another of the companies to which control of the business of photographing and projecting pictures of movement had been given by me.

Recess.

1554 Q31. Have you read over recently the testimony which you gave beginning December 4th, 1897, in the interference Latham vs. Armat?

A. Not fully. I have just glanced over a part of it. I think I read the whole of the direct testimony and a part of the cross-examination, very little of it.

Q32. The events about which you testified at that time were probably more clear in your recollection than they are now and I shall refer to your testimony in a series of questions which I shall put to you. In answer to Q15, you state that it was not until about the 1st of November that you began the construction of a machine in accordance with previous conception—previous except that, not

even then had you determined upon any one form of arresting device to the exclusion of others. Did you begin a construction of any machine before Lauste was employed by you to work on those machines?

A. I had not only determined to make a machine but had reached a determination in a general way as to what that machine would be. You heard me describe an hour or so ago a machine. I do not believe that I ever looked into the inside of that machine a half a dozen times in my life and it is now about 16 years since I had any connection with the moving picture machine business, and yet when I was called on to describe the machine, I saw it as plainly in the air of the room before me as if it had been present in physical form. In that way, I saw my machine near about the summer of 1894. To give this conception visible shape it was necessary to have machinery, as I then thought, and to have one of the most skilled workmen; and to have a place to work in and for all these things, money was necessary and neither I nor my sons had that money. Later they got money from friends and relations in the South, enough to start with, at any rate, and we immediately set to work to provide what was necessary to enable us to make these machines. My recollection is that near about the first of November, 1894, we began actual work in the shop.

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Q33. In answer to Q16, you state that about the first of January, 1895, you directed E. W. Kleinert, whom you had in your employ, as an assistant to Eugene Lauste, to order for you from the Boston Gear Works, an appliance known as a Geneva stop and you seem to have produced a bill from the Boston Gear Works, dated January 7th, 1895. Have you that bill in your possession now?

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Woodville Latham.

A. I think not. I think it was offered as an exhibit at the time of the Interference suit.

Q34. Can you state from your present recollection any of the circumstances connected with that order of the Geneva stop from the Boston Gear Works?

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A. Perfectly well, all of them. The fact was that I knew what that Geneva stop was. I had seen a cut of it, in an illustrated price list of the Boston Gear Works that I had previously written for. I took the cut to the shop, showed it to Mr. Lauste and Mr. Kleinert, discussed it with them and we agreed that the thing was worth a trial. It would have been impossible with the nicest instruments for measuring, for me to make such a description of that gear as ought to be sent to the manufacturers. Consequently I told Mr. Kleinert that he must make the proper measurements and write to the Boston Gear Works for precisely what was needed and to tell them to send the bill to me. Mr. Lauste was the chief mechanic employed by me, Mr. Kleinert, his assistant. I did not direct Mr. Lauste to write for this gear because of his only slight knowledge of the English language and because I had generally found it easier to make my conceptions clear to Mr. Kleinert than I could make them to Mr. Lauste. The gear sent for was received and tried and in Kleinert's opinion and in Lauste's opinion, and in my own, after they had explained to me its action, the gear was not accepted. Kleinert, however, told me that he could have the gear, the same in principle, but different in some respects, made in the establishment of Frederick Pearce, near us. One difference between the two gears was this—in both of them there was a driving wheel and a driven wheel. In the Boston gear, the driven wheel was outside of the

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driving wheel. In the gear Kleinert had made, the driving wheel is on the outside. If the Boston gear had been used, the difference between the periods of rest and the periods of motion would, I think, have been less somewhat than was the case when the driving wheel was put on the outside. In both cases, the circumference of the driving wheel was occupied partly by cogs and that part of the circumference occupied by the cogs indicated the time of movement. The part of the circumference not occupied by the cogs, indicated the time of rest. Now the cogs on my driving wheel, as finally adopted, occupied a small part of the circumference of the driving wheel (I have forgotten exactly what part) and consequently, in using that machine, the time of rest of the picture strip was greatly in excess of the time of movement.

Q35. Now, in answer to Q21 of your former deposition you state that an apparatus embodying the gear stop motion was completed and pictures taken with it. Was the gear stop motion in that completed machine the one you got from Boston or the one that was made for you by Pearce? What is your recollection as to that?

A. I have no recollection regarding that, but I do know absolutely that in both gears the teeth on the driving wheel occupied much less than half of the circumference of the wheel and that consequently whether one gear or the other was used, the period of rest always considerably exceeded the time of motion.

Q36. Further in answer to Q21, you state that the first picture that was photographed with that machine was photographed on the night of February 26th-27th, 1895, and you submitted a piece of film with a statement in the handwriting of

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Woodville Latham.

your son Otway and a note from W. K. L. Dickson, in these words: "To my friend, Mr. Woodville Latham. Compliments of W. K. L. Dickson, February 26th-27th, 1895. Midnight." Do you know where that note and the strip of film are now?

A. I do not. My recollection is that they were put in as an exhibit.

Q37. Can you state from your recollection of the circumstance and from your knowledge of Mr. Dickson's handwriting, whether that note was written by him?

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A. I had not the slightest doubt about it when I received the note and if I had had doubts, it would have been removed subsequently by personal conversations between Mr. Dickson and myself not only about the exploit to which the note related but about the note itself and its time of delivery into my room while I was asleep.

Q38. Can you state whether the quotation in your answer to Q21 is a correct rendering of that note?

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A. I can't say that, sir, exactly. It was substantially that. I haven't any doubt myself that the words quoted were the very words used but I would not be willing to swear so because there is scarcely any precise wording that I would recollect accurately after so long an interval.

Q39. Further in your answer to Q21, you state as follows: "Subsequently, near about the first of March, photographs were taken with this machine on the roof of the Scott building, at 35 Frankfort Street, of Eugene Lauste, his son Emil Lauste, E. W. Kleinert, my son Grey Latham, and myself. My son Otway Latham operated the machine. All except myself of those who were photographed, were in active movement, dancing and scuffling

within the field of the machine. I sat smoking a pipe, and the photographs were afterwards exhibited on a screen to thousands of people in New York City, the smoke from my pipe plainly appearing upon the screen." Does that testimony refresh your recollection sufficiently to enable you to state whether the Lauste Exhibit photograph which you have examined is an enlargement of one of that series of pictures?

By Mr. Ward:

Question objected to as improper injection of former testimony into this record.

A. I think I have already answered that question half an hour ago, perhaps, except that I stated that I was not absolutely certain whether the picture was taken on the Frankfort Street roof or the Beekman Street roof.

Q40. In the same answer you then go on to tell about some photographs taken of a boxing contest between two prize fighters, Griff and Barnet. Can you tell us from recollection anything about the photographing of that contest?

A. I suppose I can with the utmost truth tell you that I recollect everything about it except the date. My memory is not clear as to that. I was present from beginning to the end.

Q41. In connection with that same answer, you produced a clipping from the New York Mercury of May 5th, 1895. I hand you now a newspaper clipping pasted to a sheet entitled "Amet vs. Latham vs. Casler vs. Armat, Latham Exhibit No. 3, J. A. S. Com'r, Dec. 4th, 1897." Do you know whether that is the newspaper clipping which you produced on that occasion?

A. I don't know. In all probability, it was the

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same thing. I introduced a clipping from the Mercury, I remember very well, simply to show the date of the boxing match and it fixes the date at May 4th, 1895, because the date of the paper was May 5th, the day afterwards, but I paid very little attention to the wording of these publications. Most of them were absurdly complimentary, many of them, through ignorance, misstated the facts and I did not care a broken eggshell for what they wrote except as the publication of it might fix dates.

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The paper handed the witness is now offered in evidence by complainant's counsel and is marked "Complainant's Exhibit Sunday Mercury, May 5th, 1895."

By Mr. Ward:

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The introduction of this alleged clipping is objected to for the obvious reason that the witness has distinctly stated that he did not know whether this clipping was the one introduced by him in his former testimony, neither the authenticity of the clipping as such nor the date on which it purports to have been printed having in any way been proven.

Counsel for complainant states that he is prepared to prove the genuineness and the date of the clipping in question and will do so in due time, but calls attention to the fact that Mr. Eyre agreed that these clippings, as the same are reproduced in the record of the Latham-Armat Interference, might be used without such formal proof,

and that he will not go to the trouble of establishing this fact unless it is insisted upon.

Adjourned to Wednesday, April 26, 1911, 11 a. m.

New York, April 27, 1911, 11 a. m.

Met pursuant to adjournment.

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Present—Counsel as before.

Direct-examination of Mr. Latham (continued) :

By Mr. Ward:

In view of the understanding between my associate having charge of this case and counsel for complainant, the objection to the admission of the clipping from the Sunday Mercury as an exhibit in this case is withdrawn, and it is agreed that this and further newspaper clippings of substantially that date which were heretofore introduced in evidence in the interference case may be introduced as exhibits in this case, subject to examination by defendant's counsel and to corrections.

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Q42. I hand you a clipping from the Sun of April 22, 1895, which was Exhibit No. 4 in the Latham vs. Armat Interference. Do you recollect anything about that clipping?

A. Yes, I recollect all about it. We had invited,

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or my sons had at any rate, the representatives of the various newspapers to come to our Frankfort Street shop to witness the operation of our newly made machine. They all expressed their surprise and their admiration of the thing and left, but a little while afterwards the Sun representative returned to say that the Sun would like to know if I had any objection to his making a drawing of the machine for publication. I said certainly not. The next morning some account of the action of the machine was published in the Sun and a picture of it was made; also the Sun published an interview that was alleged to have been had the night before after the visit of these newspaper men to my shop, and one paragraph attributed to Mr. Edison was this, if they (meaning myself and son) exhibit this machine, improve on what I have done, and call it a kinetoscope it is all right. I will be glad of whatever improvements Mr. Latham may make.

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"If they carry the machine around the country, calling it by some other name, that is a fraud and I shall prosecute whoever does it. I have applied for patents long ago." I immediately wrote to the Sun to express my surprise that that interview had been had and requested space in the Sun for a reply, which was given to me, and which I used.

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The clipping handed the witness is offered in evidence by Complainant's Counsel and marked "Defendant's Exhibit Clipping from Sun April 22, 1895."

Q43. Do you recall whether you exhibited any moving pictures to the representatives of the press or others on the occasion referred to in this clipping?

A. Certainly it was the exhibition of the moving pictures by use of my machine that I had invited them to come to see.

Q44. What sort of projecting machine did you use on that occasion?

A. The same machine which was afterwards used with our own film rather than the Edison film for photographing the movement.

Q45. Did you have any projecting machines of your own make at the time when you first used your taking machine in February or March, 1895?

A. None except perhaps one or more temporary things that we had set up in the shop for purposes of experiment. The action of these, however, was never exhibited to anybody outside of the shop.

Q46. Did these have a continuous or an intermittent feed for the film?

A. Some one and some the other. Our object was to find out whether projection could be more advantageously made with a continuously running machine than with a machine including an arresting device.

Q47. I hand you now a copy of the British Patent No. 4841, of 1896. Are you the Woodville Latham named in that patent?

A. I am.

Q48. Did you ever build any machines like the machine illustrated in that patent, and if so, can you state when you built either that identical machine or any other embodying the same principles of construction and operation?

A. There are two questions in one here and I don't exactly know how to answer. Please read the question again and I will tell you when to stop. We built according to my recollection five machines substantially like the cut shown in the

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British Patent. I am uncertain whether we ever built a machine identically like for example, Fig. 1, of that patent. In Fig. 1 a bellows connection appears between the lantern and the condenser. I remember perfectly well that we tried that and came to the conclusion that it was either worthless or certainly not worth the money it cost, and my recollection is that in no one of the five machines referred to was the elaborate regulating device shown in the lower part of the figure included. It proved to be not of enough service to justify the expense of making it.

Q49. Do you know whether any taking machines were made either by you or by the Anthonys under authority obtained from you like the first machine which was tried on February 26 and 27, 1895?

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A. Yes, I know that other machines were made subsequently. They were machines with an arresting device different from the arresting device that I had used with the machine exhibited to the newspaper men, a device, however, which I had tried previously in the shop and discarded. I had nothing whatever to do with the making of these machines, that is nothing directly, but some while after the events referred to above, my son Otway Latham, knowing that I had an interest in these machines carrying sprocket wheels, notwithstanding the fact that the business had been in the hands of the Eideloscope Company, told me one day that E. & H. T. Anthony Company would send him to Mexico to take a lot of pictures if they could be assured that he had the right to deal with me. I at once said to him, I will arrange all that by transferring to you absolutely my entire interest in the sprocket wheel machine and now you

can go and make what arrangements you please with the Anthonys. He had been a very faithful assistant to me, had been the manager of the shop and I was glad of the opportunity to give him a chance to rehabilitate himself. The Anthonys had a number of machines made, how many I do not know, nor do I know where they were made. My recollection is that they were considerably larger than my machine marked Exhibit No. 12 in the old interference. The arresting device consisted of a disk having a slot running from near the circumference to near the centre, and fastened into that slot was an arm perpendicular to the face of the disk. The machine was arranged to form a loop in the film and the revolution of this wheel bearing the pin was to tighten the loop and we could by moving the pin to one position or another with reference to the shaft of the wheel take up more or less of the loop that might be necessary. I had tried the same thing a long while before in the shop and he had superintended work on it as on the other plan. I was not satisfied with its action. He preferred it, however, I think because he wanted to save the Anthonys as much money as possible and, as I said, that was the stopping device he employed.

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Q50. In giving your 1897 deposition you had an exhibit which was referred to as "The original machine," and as "Exhibit No. 12." What was that machine?

Objection is made to this manner of conducting the examination, namely, by quoting statements or mentioning statements in the former deposition, many of which in the past have been grossly leading questions,

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instead of first asking the witness his recollection as to such matters and then if he is found to have no recollection on the subject allowing him to refresh his memory, by his former deposition. The witness may have found since that deposition that he was in error as to facts or circumstances therein testified to, and this is illustrated by the fact that in the rebuttal testimony at that time he was found to be mistaken on certain facts which he had testified to on his direct examination, as will appear from such deposition.

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A. My answer to that question would be simply a repetition of my answer to Q23 in this examination.

Q51. I did not mean to ask for a description of the machine, but to inquire as to what machine it was if you can now state?

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A. I made one machine and one machine only at first. Before completing that machine, a number of experiments had been tried in the shop with temporary appliances, for example, Mr. W. K. L. Dickson suggested an arresting device, to try which it was simply necessary to mount a revolving shaft bearing this sprocket wheel and to attach to this shaft the arresting device and to set the whole thing in motion so as to see whether the sprocket wheel would be stopped and started in a satisfactory way, but I certainly would not call that a machine. The first machine that I made with an arresting device and the only machine I ever made with an arresting device was the machine that was shown to the newspaper men and the machine that was referred to in the Interference suit between Armat and Latham as Exhibit No. 12.

That machine was the machine with which we took all the pictures that we subsequently exhibited, including a Bull Fight in Mexico and the Rapids at Niagara.

Q52. Have you seen that machine Exhibit No. 12 since you testified in that interference in 1897?

A. I have not, and had not expected to see it again because it had fallen into other and hostile hands, but Mr. Richard Anthony succeeded to my very great surprise, in buying the machine from the parties who had it. It was to some extent dismantled but the essential features of it remained, and it was brought to the room in the Post Office Building, I believe it was, Commissioner Shields' Office, and it was afterwards sent to Washington City as an exhibit. Since then I have known nothing in the world about it.

Q53. Do you recall the first time when you ordered any film from the Eastman Kodak Company?

A. Only in a very general way. This much I can say without hesitation, that it must have been shortly after the exhibition of the machine to the newspaper men, because we were thoroughly satisfied then that we had accomplished the object we set out to accomplish and one of those objects was to use a wider picture strip than Edison and perhaps others had been using. Eastman had to experiment to some extent before he could assure himself that he could make for me the kind of film I had called for, but I agreed to take at his own price a table of such film as he might make for me, about 2,000 feet of strip it would make when cut up, and he sent it to me and we found it just what we wanted. Then it became necessary to make a punching machine because a punch-

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ing machine suited to punch two lines of holes three-quarters of an inch apart had a very different punching wheel from one that was to punch two lines of holes something like $1\frac{1}{2}$ inches apart, is my recollection. These were necessary delays, not in making the invention but in being ready to make pictures for exhibition to the public and to make suitable projecting machines for showing those pictures on the screen.

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Q53½. Do you remember from whom you obtained the film that was used with the taking machine by your son Otway and Mr. Dickson on February 26-27, 1895?

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A. At that time my two sons, Gray Latham and Otway Latham, were using Edison's kinetoscope and with that kinetoscope they were using picture strips made by the Edison concern. I have an indistinct recollection that Mr. Dickson happened to have in his possession some of this strip. It was all of one width, all punched in exactly the same way, all of a thin and unsubstantial material, as I thought. At any rate it seemed to me not sufficiently strong for our purpose. Whether Mr. Dickson furnished the little strips that were used or my son took some piece of strip that he happened to have I do not know, but certainly I would not have countenanced any dishonest use of Mr. Edison's strip. Even at the time I am now talking about I had very little thought of making a business of photographing pictures. I started out with the idea that I would get Mr. Edison to furnish the pictures and that I would project, and as I tell you it was rather accidental that I discovered that this original machine as I still call it, could photograph a picture as well as it did, and we kept it afterwards, especially as some friction bad

developed between Mr. Edison and Mr. Dickson. We kept it for photographic purposes and used it for that purpose exclusively, and used a different style of machine for projecting the pictures, and we did this for the reason that the projecting machines we made and used were of simpler construction, much cheaper and because the wear and tear on the film would be less than it would be if in projecting we used what was then called the stop movement machine.

Q54. I am referring to the unexposed film with which you took the pictures of the swinging incandescent lamp. Do you remember where you got that film from?

A. I do not. I am quite sure, though I may be mistaken, that I had never up to that time got any new film from Eastman. I am quite sure that my son never could have got any of such blank material from Mr. Edison. If I had been right in my impression that the narrow film was used in that experimentation or exhibition to the newspaper men I feel perfectly assured that Mr. Dickson brought it from Edison's laboratory. I should never have made any special inquiry about it except to find out whether anything improper had been done by my son. If I had been on the ground, but as a matter of fact I was an invalid at the time confined largely to the house and hadn't been in the shop quite a considerable while.

Q55. In the prior inference you produced a bill from the Eastman Kodak Company dated February 18, 1895, for 12 rolls 2 inch Trausk film 25 feet long. I hand you a copy of that bill and ask you whether that recalls to your mind any circumstance different from those you have referred to in your last answer?

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A. Understand, if you please, that the answers I have been giving heretofore as to the time in order in which certain things were done I have relied almost exclusively upon my memory, but these three bills in my hand, or copies of them, show me clearly that there was already in my shop some film sent by Eastman shortly, and that this film was thin film like that employed by Edison, and it was later that the bill of April 27th is obviously the bill for the whole table of films, thick film, which I referred to just now. Now, it would not take long for skillful workmen to mount wider sprocket wheels and to have a wider window for use of these short lengths of film. Understand that already we had made up our minds long before these circumstances I now dictate, we knew we would want a punching machine for a two-inch film, and I have no doubt that there was one in the shop. I know we made sprocket wheels in great number, so that I feel absolutely certain now in the face of the circumstances that the swinging electric lamp was photographed on the wider film. I cannot see the importance of the matter but it would be easy to settle it I think by tracing the exhibit in Washington and seeing whether it is on a 2 inch film or a $\frac{3}{4}$ inch film.

Q56. Did you ever order any film for taking pictures from any other concern than the Eastman Kodak Company?

A. Not that I remember. I do not remember having known of any other concern that made film at that time nor do I know of any concerns that make them now. In order that the truth may be reached as to all these minutiae it is necessary to remember that our pecuniary resources were small at the time and that we were bound to econo-

mize, hence the first orders of films here were for small quantities and I remember perfectly well that I staggered a little bit when Eastman told me I would have to take a whole table making about 2,000 feet of 2 inch strip if he made it for me on special order.

Q57. Will you please look now at the certified copies of the drawings of the patent in this suit and particularly at Figs. 2, 6 and 7, and then state in what respects the feed mechanism of Exhibit No. 12 in the former interference resembled or differed from the feed mechanism shown in these figures?

A. I stated in my examination yesterday that I had probably not looked into that original machine a half a dozen times in all my life. I had given to the workmen orders to make a reel for holding the film and a sprocket wheel for withdrawing the film from that reel. Whether the reel was exactly about the other portions of the apparatus as shown in this figure, or one side, or whether it contained a reel at all, I am sure I could not now say, because again and again I had made temporary devices in which the film was drawn from the box through a slot in that box. Substantially and in every single essential particular so far as my memory goes the feeding device was the same.

Q58. Do you remember the name of the draughtsman who made the drawings for this patent?

A. I do not remember that any draughtsman ever made the patent drawing for me except Mr. Raphael Netter and I remember clearly and distinctly that Mr. Netter never made for me a drawing of a machine to be sent to Washington until the machine had assumed bodily shape and all of the patent drawings made by him were copied from the machine standing before him. I did not know any-

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thing about patent matters then else I would have applied for a patent in the summer of '94 when I first saw this machine in the air, that is the way most of these patent applicants do, but I waited until I had made the machine, operated it and found that it would do what I had expected it to do before I sent it to Mr. Netter and my patent attorney Mr. J. E. M. Bowen, now dead, though he had been at one time Chief Examiner in the Patent Office, was well acquainted with patent matters, he never advised me of the risk I was running.

Q59. Mr. Netter has testified that when he first saw the machine from which he made this patent office drawings it was in a partially assembled condition in your shop. If that be the fact, how do you account for it?

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A. Simply enough. Mr. Netter is himself an accomplished man in all these lines, and, if when he came to the shop to make a drawing of the machine and some parts of it happened not to be in place but lying on the table, it was a matter of a few words to make him understand just exactly where the missing parts belonged.

Q60. Do you know if the machine from which Netter made these drawings was the same machine that was tested by Otway Latham and Mr. Dickson on February 26-27, 1895, or whether it was one of the later machines that you have said were made?

A. Mr. Netter made the drawings from what I have again and again called the original machine. I don't know whether Mr. Netter ever made any drawings for my son and Mr. Anthony subsequently, but in all these drawings where my name and Mr. Netter's also appeared in the signatures it is

the machines that I myself had made that Mr. Netter made his drawings from.

Q61. Do you remember now, Mr. Latham, how long prior to the day when you received the blue penciled note in your son Otway's handwriting, and to which you had fixed the memorandum of February 27, 1895, your original machine Exhibit No. 12 in the former interference had been constructed so as to be capable of taking a series of photographs of a moving object?

A. You will have to allow (you lawyers) that there are certain circumstances that are more convincing than any oral testimony. What is called circumstantial evidence is evidence that cannot possibly be explained except in one way, and not simply evidence that raises a suspicion. Now I am as certain as I am that I am sitting here talking that that machine never was in condition to take successfully a picture of a swinging lamp or the picture of anything else in motion until that night of the 26th of February, 1895, because it is absolutely certain that I would have been notified of the fact by my son and because there would have been no earthly occasion for the slipping under my door on the morning of the 27th at 3 o'clock the note in blue pencil. I do not want to be misunderstood here in saying that the picture machine was not prior to the night of February 26, 1895, in condition to photograph pictures of movement, but that if it was there had been something lacking to enable us to do that sort of work, film perhaps, punching machine perhaps, but that on that night of February 26, 1895, my belief is the machine was first actually used to photograph a picture of movement. For example, if Mr. Kleinert or Mr. Lauste should state

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positively that the machine had for a considerable while been in suitable condition for photographing I should not consider that that testimony would be contradictory of what I have just said.

The second sentence of the answer is objected to in view of what precedes it, and the last sentence objected to as irrelevant and immaterial.

1613 Q62. Do you recall now how long prior to February 27, 1895, this machine about which you have been talking was in actual process of construction?

A. What I remember in connection with this matter is that various obstacles such as the want of money prevented our starting out regularly to make a machine until about the 1st of November, 1894, some time was spent, how much I don't remember, in purchasing and setting up machinery, getting material, and so on, but I have the impression that it was early in January, when the orderly work began of making the machine and devices that were necessary to be used with the machine, 1614 punching machine, for example, printing machines, for another example, developing appliances, &c., &c.

Q63. Who paid Lauste his wages?

A. I as an individual paid his wages, because at this time the whole interest was mine and my two sons. I think I have already stated in this examination that it was my son who secured the money necessary to enable us to begin, but that money was immediately turned over by them to me and all bills were paid by me, and receipts were given to me for everything of consequence purchased.

Q64. Who gave to Lauste the instructions as to what he should do in the construction of this first machine which was used as you have stated for the first time to your knowledge on February 26th or 27th, 1895?

A. The remark I am about to make would astonish some people, but it is nevertheless true that though I have been a successful worker in a good many lines I have always been a diffident man and not disposed to put myself forward. Now Mr. W. K. L. Dickson had represented to my son that he had already invented such a machine and they came to me and told me what Dickson had said. My reply to them was that it was a matter of no consequence to me whether Mr. Dickson furnished the machine that we wanted or I furnished it, that I had interested myself in the matter as they knew, solely to benefit them and that I would prefer that they should get Dickson to direct Lauste, telling my youngest son, Otway Latham, however, that I wanted him to be present always in the interviews between Dickson and Lauste, to see exactly how the cat was jumping. Subsequently, as has been testified to by Mr. Dickson and others, some so-called experimentation was made at the laboratory (I was present once myself) with a view of finding out if my memory served me, simply what sort of objective would give the best light on the screen. On this occasion when I was present, I became satisfied that Mr. Dickson did not know the first principals of experimentation. Still I believe the statement that he had made to my son that he had up his sleeve, or rather over in Jersey at his residence a machine already made or at any rate a description of how it was to be made. I then ex-

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pressed my doubts to my sons as to the possibility of getting any real assistance along that line from Mr. Dickson. Later on, as has been testified to by somebody, Mr. Dickson's arresting device was tried in the shop and failed. Meanwhile Mr. Dickson had a good deal of conversation with Mr. Lauste in French in the presence of my son who did not know French, and this irritated my son and he came to me and complained of it and I told Dickson subsequently that I thought in all fairness he and Lauste ought not to confer about a matter of our interests in a language unknown to my son.

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Mr. Dickson's position with Mr. Edison was subordinate of course to that of Mr. Edison. Mr. Dickson himself had told me previously that he himself was the inventor of the Edison Kinetoscope but had no credit for it, and this and other remarks and actions of his led me to believe that Mr. Dickson would not be satisfied in any subordinate capacity where he had to take orders from gentlemen like my son and myself who in his estimation were utterly ignorant of the matters we had determined to employ ourselves with. The upshot of

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this was that I went to Mr. Lauste and told him thereafter, having previously consulted with my son, he must take his orders from me or from my son Otway and not from Mr. Dickson; that it was my son and myself who had the money to pay his wages and all other expenses and not Mr. Dickson and that I didn't want him to receive contradictory orders, that is one order from Mr. Dickson and the countermanding order from my son or from myself. Now Mr. Lauste's mental and spiritual make-up was very much like Mr. Dickson's. He was not satisfied unless he was the great high

Tikoo of the establishment, and as I had already been modest with him, had deferred to him a good deal and hadn't seemed to be his master in matters which I knew he was better acquainted with than myself, he was pleased at my eliminating Dickson and at once told me in substance that Dickson was not only absolutely ignorant of these matters but that he had worried him by calling on him to do things that he knew would be simply a waste of time.

Q65. I meant rather by my question not who gave Lauste orders but who gave him the ideas that he was to work out?

A. I alone, either directly or through my son.

Answer objected to as indefinite.

Adjourned to April 27, 1911, at 11 a. m.

New York, April 27, 1911.

11 A. M.

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Met pursuant to adjournment.

Present—Counsel as before.

Examination of Mr. Latham continued:

Q66. Do you remember whether the apparatus used for projecting the pictures on the occasion referred to in the Sun clipping of April 22, 1895, was a continuously or an intermittently film feeding device?

A. Well, my memory is refreshed by looking

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at this drawing made by the Sun man. I recognize one of the supports which belonged to the continuously moving picture machine and not to the machine that has been called heretofore the original machine and is Exhibit No. 12.

Q67. I hand you now two bills or invoices from J. B. Colt & Co. and the letter from the same party which from their marks of identification appear to have been exhibits in the Latham vs. Armat Interference. Do you recall anything in connection with those exhibits?

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A. Well, I recall the circumstance that I bought these things from Colt and probably a good many more.

Q68. For what were these things intended and for what were they used?

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A. They were intended for and were used with the projecting machines, that is, those that had no arresting device. I have not read these items over carefully and even if I were to do so I would not be able to say positively that some one of these things may not have been purchased for the photographing machine. I think all these were for the continuous moving machine. Many of them discarded afterwards and other things substituted.

The papers referred to are offered in evidence by complainant's counsel and marked "Complainant's Exhibit Colt Bills and Letter."

By Mr. Ward: In view of the witness's answer and the items of the bill itself, the question and answer and the introduction of the exhibits objected to as irrelevant and immaterial.

By Counsel for Complainant: Counsel

for defendant is reminded that the former deposition of this witness is in evidence and that the witness is open to cross-examination on such deposition.

Counsel for defendant wishes to state that he is aware of this fact but is also aware of the fact that the issues in Interference referred to, cover a somewhat different machine, in his opinion, from that of the patent in suit and that the prime object in that interference was to prove that the machine was a projecting machine and furthermore he is aware of the fact that the items on this bill show that they relate to a projecting machine.

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By Complainant's Counsel:

All of which is quite immaterial to the particular fact in question.

Complainant's Counsel now offers in evidence Latham Exhibit No. 7 from the Interference Latham vs. Armat, said exhibit being identified by the initials of James A. Shields, Commissioner, and the official stamp of the Patent Office.

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By Mr. Ward:

Exhibit objected to as not having been proven. It is obvious that the alleged initials of Commissioner Shields are not his initials, since the Court will take judicial notice of his signature. It is also obvious that the alleged official stamp is not the official stamp of the Patent Office and there

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is nothing about it which the Court can take judicial notice of.

By Complainant's Counsel:

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I am glad to know at this stage of the case that Defendant's Counsel is disposed to raise such trivial and immaterial objections but I shall take the precaution to establish by the testimony of Mr. Shields who acted as Examiner in the Interference that this Exhibit was one of the exhibits offered on behalf of Latham in the said Interference and is merely a blue print copy of the drawings of the Latham application which became the patent in suit.

By Mr. Ward:

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Defendant's Counsel is perfectly willing to stipulate that these are blue prints of patent office drawings in suit with an effective date as early as the filing date of the patent. Beyond this, he does not consider the matter trivial and he thinks complainant should be put to his proofs thereon.

Q69. I hand you now a clipping from the Daily Inter Ocean of Chicago, dated June 10, 1895. Do you recollect anything about that clipping?

A. Yes, sir, I remember this. I think I know who wrote it. My recollection is that it was written by Howard Hackett who at that time was the Sporting Editor of the World in New York. He did not tell me so himself, but my recollection is that my son told me he wrote it. He was a friend of his and an acquaintance of mine.

Q70. Was that clipping, so far as you know, ever in your possession?

A. Yes. I don't know whether this particular one was but I myself got from the Chicago Inter Ocean either this one or one exactly like it. Indeed, I got a number of copies of the paper and cut out this article to send to friends. I remember particularly in regard to it that I was disgusted at these allusions to me personally. The information, whether false or true, was not got from me, personally. I refused positively when newspaper reporters came to me, to give them any information whatever in regard to my prior life and doings. I told them it was a matter of no consequence and that the machine was the thing I wanted the public to look at and the picture.

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The clipping handed the witness is offered in evidence by Complainant's Counsel and marked "Complainant's Exhibit Clipping from Chicago Inter Ocean."

Direct Examination Closed.

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Cross-examination by Mr. Ward:

XQ71. Prior to giving your present deposition and within a few days of giving the deposition you had examined the drawings of the patent in suit, had you not?

A. Well, yes, I made no very close examination. I looked at it sufficiently to satisfy myself. That was about all.

XQ72. And I believe you have testified that you had read over your direct deposition in the Interference case and a part of the cross-examination. Is this correct?

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A. I do not remember having been asked that question on this examination but I have a copy of my testimony and the testimony of my witnesses and when Mr. Page first came to see me I told him so and the next day he came and asked me if I had read over the testimony and I told him that I had read my direct testimony cursorily, and a part of the testimony of my son Otway. At any rate, that was a fact.

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XQ73. Have you also read any of the testimony given by W. K. L. Dickson and Eugene Lauste in this case?

A. I didn't read the testimony of those two men myself but it has been read to me. If I had wanted to remember either one of them I should have read them very carefully myself as I had the opportunity to do so, but I have been informed as to the general drift of their testimony and was curious to know generally what they said and it is only a part of that general matter that I remember.

XQ74. Were you shown a sketch made by Mr. Lauste and introduced in this case as Complainant's Exhibit Lauste Sketch?

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A. I was shown the sketch but did not understand it, do not understand it now and never did understand any drawing that Lauste made; if my soul's salvation depended on it, I could not give the slightest idea now of what the sketch looks like. As a matter of fact, Lauste never made drawings for this work, didn't know how to do it.

XQ75. You remember though, do you not, this much about the sketch, namely, that it showed a pair of gear wheels feeding the film to form a loop above the gate or window and a second pair of sprockets below the gate or window, forming a second loop with some mechanism between the

loops for intermittently moving the film. Now, in answering the question, I want you to understand that I am disregarding any specific mechanism or connecting gearing shown in the sketch.

A. If I saw and observed these things that you have mentioned and understood them, that would be one thing; but as a matter of fact, I did not understand what was shown me. I did not think the gentleman who showed it to me understood it and to me it was a matter of no consequence and that is the reason why I am so uncertain now as to what the drawings contained.

XQ76. Do you consider that your mind is as clear now as it used to be in 1895 as to understanding mechanical drawings?

A. I never understood a mechanical drawing of any pretension in my life. It would be utterly impossible for me to look at a mechanical drawing and be able to picture to myself what it represents. In my direction to Lauste, the little drawings I made were hardly worthy of the name. I never would have made them for an English speaking boy of fair intelligence of ten years of age but by words and little sketches when he couldn't understand my language, I got into his head generally what I wanted and that was about what I tried to describe in my direct testimony a day or so ago.

XQ77. And you could not have understood representations in such mechanical drawings in 1895?

A. Certainly not. Understand I said pretentious drawings.

XQ78. What do you mean by "pretentious," such as this sketch of Lauste?

A. Well, I see enough similarity here now to the machine I had constructed to be prepared to be-

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lieve that this was intended as a sketch of some of the parts of the machine. One thing on it, I instantly recognize. It is an intermittent gear that was finally adopted. There is in the drawing, so-called, of Lauste, no representation of the intermittent gear as a part of the machine except as he draws a line from the lower sprocket wheel to the intermittent gear which he has attempted to represent on the right. I recognize 4 gear wheels. I recognize a rod and beveled gear connection between the top gear wheel and the lower gear wheel and I observe what seem to be two idlers, pressing rollers, on the upper sprocket wheel and one on the sprocket wheel just below. Now, if this thing had been brought to me when the subject of these machines had not been talked about, and I had been asked what does that represent, I am sure I would not have connected it with my machine. Besides, this is not a working drawing, nor does it pretend to be a working drawing nor would it be a working drawing if every one of these 4 sprocket wheels were truly round, if the sprockets were all exactly the same height and even if means were shown by which these three pressing rollers were mounted and were kept in contact with the sprockets, it still would not be a working drawing. A working drawing does not usually look like the thing of which it is a working drawing. For example, on Monday morning, I believe it was, when Mr. Page first came to see me, I was looking over some papers I had and I took out some sheets which were working drawings and I looked at them, glanced at them and thought, of course, they were working drawings of the machine, the projecting or photographing machine, handed them to Mr.

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Page. He looked at them and said, "Why, these are the drawings of your bread machine." Well, he saw the label or recognized the drawings from a description I had previously given him of my bread machine. I do not know, but as soon as he told me they were working drawings of the bread machine, I remembered that I had never had but one set made. I remembered who made them and all about them, and I immediately rolled them up and threw them back in the box and have not looked at them since and have not seen them since and could not describe them.

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Complainant's Counsel notes that in giving his last answer, the witness examined Complainant's Exhibit Lauste Sketch.

XQ79. I understand from your last answer that you cannot read a working drawing any better if, as well, as assembled drawings. Is that correct?

A. I can make some approach to understanding assembled drawings, depending, of course, upon the simplicity or intricacy, but as I have already said, I have never been able to begin to understand the working of it until the draughtsman has pointed out this and that thing to my notice and even then, I was never able to understand the thing as a whole.

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XQ80. I hand you a copy of the record in the former interference containing drawings of patent 579,901. Referring to Fig. 9 of that patent, can you describe the operation or the use of the apparatus shown in that figure?

A. That is a mechanical device, called, I believe, a crank movement. It is an arrangement for converting rectangular movement into circular move-

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ment or the reverse. I have now my attention drawn to another thing. Obviously, the arrangement pictured here is one for converting circular movement into rectangular movement and there seems to be a roller at the end of the rod which is made by this device to move in a straight line and to the left of that wheel there is another wheel represented seemingly of precisely the same size but the circumference of this second wheel is represented by a dotted line instead of a continuous one. Then I see a portion of what I at once infer intended to represent a band, and the inference I draw is that by a leftward movement of the rod with a wheel at the end of it, the object has been to push a portion of that band out of a vertical line.

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XQ82. In answer to Q23, you give a very detailed explanation of the general principle of movement of the film of your machine as you remembered it, this description being given in answer to a question asking you to describe the machine from memory. Do you think that in view of the fact that you had recently examined the drawings of your patent and had recently read over the depositions of yourself and had had read to you the depositions of Dickson and Lauste and had seen the very clear and graphic sketch of Lauste, that your memory was considerably refreshed by this recent information?

A. I do not.

XQ83. You would have remembered that much of the machine had you been called on to describe it a month ago?

A. I think so.

XQ84. Referring to your answer to Q23, is that your recollection of the machine as finally com-

pleted or is it your recollection of what you had in mind as early as the summer of 1894?

A. It is both. Of course, with general notions in my mind in the summer of 1894, I was careful to have Mr. Lauste include in the machine, what I told him to include, and my son, Otway Latham, was always on the ground to see and understand what Lauste was doing. Possibly, I ought to add that every single one of the elements that I had mentioned there is not essentially necessary, several of them can be omitted but I have a strong impression that when the so-called exhibit No. 12 was completed and made ready to take to Mexico, say, or to the Falls of Niagara or elsewhere, where pictures were photographed, that it included all the elements that are mentioned in answer to Q23.

XQ85. I am not referring just now to the elements which were eventually embodied in the machine but what I am trying to get at is, what part or how many of the elements enumerated in your answer to Q23 had you clearly in mind prior to say, November, 1894. You have just stated that you had general notions in your mind in the summer of 1894, and you have also stated that all of the elements that you had mentioned were not essential. Now, please state, with this understanding of the matter, what elements you consider unnecessary?

A. I think I used the expression in the previous answer "not absolutely necessary" but I could take that same Exhibit No. 12 or any other stop movement machine made by my sons and dispense absolutely with the loop furtherest from the delivery wheel, and could take just as good pictures as if two loops were formed. I could dispense with the receiving wheel and have a large box into which

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the film could drop, whether in projecting or in photographing. If in photographing, of course, the box would have to be light proof. In projecting pictures, that would not be necessary and even a receiving box would not be necessary. The picture strip after having served its purpose, could be run through on to the floor or from an upper room to a lower room through a slot. Now, these and various other arrangements, we made and tried, suggested sometimes by myself and sometimes by the workmen; but the original notion that I had in my mind when I undertook to make the machine was one I tried to describe in answer to Q23 and my impression was that no one of these elements was finally omitted.

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XQ86. Now, I want you to dismiss from your mind for the time being, anything relating to the final construction of the machine and confine yourself entirely to the period prior to the time you commenced building the machine. In fact, confine yourself to a time prior to the first of November, 1894. I wish to know what, if any, specific means you had in mind at this time for operating the film. With this understanding, please state what specific means, if any, you had in mind, for operating this film at this early period?

A. I am compelled to answer that question at a little length. I had no occupation at that time and when my son Otway first inquired of me whether I thought I could make a machine and had got my answer and had told me that he was sure he and his brother, through friends in the South could get all the money necessary, I wrote a number of makers of arresting devices and I recollect more particularly that I wrote to the Boston Gear Works. They sent me their illustrated price list

and I found in it a number of devices, some of which appeared to me to be promising for our purposes and some not, but as no bodily shape had been given to my conception it was utterly impossible to do more than I have stated in my answer to Q23.

XQ87. You hadn't made any drawing of your proposed machine up to the time you commenced the construction of it, had you?

A. No, sir, I had made nothing of the kind, and never did make anything worthy to be called a drawing but sometimes I would find I could not convey my idea even to my son without making a little clumsy sketch to help my work and I have no doubt I made many of them, and tore them up as fast as they served their purpose.

XQ88. At what time did you make the sketches you referred to?

A. In answering that question, I would be glad to have you remember that it was shortly after my sons began to exhibit Edison pictures with the Edison kinetoscope on Nassau Street, from that time on, I thought of nothing else. I talked of nothing else scarcely. I dreamt about it and if there was not so much objection to the long answers I could tell precisely why I concluded very early that each one of the elements that I endeavored to describe in answer Q23 direct-examination, would be indispensable.

XQ89. Prior to the time you commenced the actual construction of the machine, did you have in mind the idea of forming the loop by continuously driven sprockets as distinguished from a general idea of forming a loop at some time with some suitable mechanism?

A. The first it occurred to me was, we are going

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to have very long strips and we must have the delivering reel to hold these strips, that if I drew the film from that reel that I would, of course, use a sprocket wheel because I was familiar in a general way with Edison's kinetoscope as described by my son. I knew that if I wanted to jerk the portion of that film sufficient to photograph a picture on or to bring into proper place, a picture on a strip which was to be projected that I would tear it and I saw at once that I must have the loop so that there would be no resistance to the sudden movement I was going to give it. Now, that put into my mind the motion that an arresting device of some sort would be necessary. If I had an arresting device above the window, I saw clearly that there would be no certainty of the film being held flat in its proper place at the window. If I had the arresting device below the window I would have made the loop below the window and there would be no loop above the window and the very next movement of the film so as to get a picture or a picture space in position would have led to the tearing of the film inevitably. Now, then, with this idea in my mind clearly, I must have a loop between the delivering reel and the window. The next thing which then came to my mind was this: The machine I am going to try to make must be a portable one, consequently I must have a receiving reel and I must arrange to have it constantly turning so as to take up the film or that portion of it that has already served its purpose. Now, both these reels, even when one of them, that is, the receiving reel, was empty, were too heavy to be stopped and started suddenly, so that I said, I think I shall have to have another loop made at the same time that the loop above the window is

made, in order that the receiving reel may take up the used film by a continuous movement without danger of breaking. It is to be borne in mind that if I had a wheel loaded with film mounted so as to move freely on a shaft it requires a certain strength of pull on the film to make that wheel revolve because my leverage here is a distance from the outside of this reel full of film to the centre of the axis on which the reel is mounted, but that as more and more of the film is delivered from the delivering reel, my leverage gets less and less and the pull must be stronger and the strain on the holes of the film made by the sprockets would be greater and greater and it seemed to me that it would be necessary to introduce some device to avoid the chance of having the holes broken by the sprocket. These things, I said to myself, at the proper time will be presented to the workman and possibly he or he and I together or he and I with some outside assistance may meet any difficulty that seemed then to face us. Something similar might be said in connection with taking up the film on the receiving reel because here we have a reversal of the conditions applied to the upper reel. Here we have a leverage that is getting greater and greater, all of which convinced me, that it would be impossible to have the two reels geared together and so on and so on.

Adjourned to Friday, April 28th, 1911, 11 a. m.

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New York, April 28, 1911, 11 A. M.

Met pursuant to adjournment.

Present: Counsel as before.

Cross-examination of Mr. Latham continued:

XQ90. Is it your contention then that when one familiar with moving picture machines decides to draw the film from a reel on which it was rolled, that it would be obvious that a loop should be
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The question is objected to as incompetent because it inquires of this witness an opinion which it is not made clear that he is competent to give, nor would this objection have any the less force if it were shown that he were.

A. I can only say that it seemed obvious to me at the time.

XQ91. This was the first thing that occurred to you when you determined to deliver the film from the reel, was it?

A. It is impossible for me to say whether it was the first, second or third thing.

XQ92. But it was obvious to you that the film would tear without such a loop?

Same objection as to the preceding question.

A. It seemed obvious to me.

XQ93. In your answer to XQ89 you stated that you originally had the idea of forming the loop

with a sprocket, and in your answer to XQ86 you stated in substance that at the time prior to commencing building a machine that since no bodily shape had been given to my conception it was utterly impossible to do more than I have stated in my answer to Q23. Do I understand from this that prior to the commencement of work on the machine you had not determined upon any particular connecting gearing to drive your sprockets for moving the film?

A. I think I may say with perfect truth that I had determined everything to my complete satisfaction, except the arrangement for arresting the motion of the film.

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XQ94. In your former deposition in XQ309 in answer to the question when did you conceive of the means which you would employ and make up your mind how the different parts of the appliance should be connected together so as to make them co-operative, you answered that "I will answer the last part of your question first. Questions touching the connections of the several leading parts of the apparatus together so as that they would work in co-operation, were left almost exclusively to the mechanic." * * * What I wish to know is what did you refer to as the connections of the leading parts which you left almost exclusively to the mechanic?

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A. I can answer that by a simple illustration. The machine is to contain two sprocket wheels running together, the connection can be made by gearing or can be made by cords or belts.

XQ95. Did you sketch out and explain to Lauste that you wanted him to drive the sprockets forming the loop by any particular kind of gearing or did you leave this to him?

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A. I can't answer that question. Mechanics usually know the different methods of connecting two wheels, probably we discussed all of them and I left to his judgment the selection.

XQ96. Did you leave it to his judgment as to whether or not the sprockets forming the loop should be driven from the delivery reel, that is geared to the delivery reel or driven independently and separate from the delivery reel?

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A. That sprocket was never connected with the delivery reel. I am sure that neither Lauste nor I ever thought of such a thing as gearing these two things together.

XQ97. Did you leave it to Lauste to decide how the sprocket wheel should be driven?

A. The whole machine was driven by an electric motor or by hand, and no matter what driving force had been determined on if a dozen shafts had to be driven by that same force the force might be applied to any one of the dozen, provided the whole dozen shafts were geared together.

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XQ98. You evidently did not understand what I wished to ascertain by the question. I wanted to know if you left it to Mr. Lauste to determine the gearing by which your main driving shaft should operate the sprocket forming the loop?

A. If it was a matter of mere mechanics, that is, a matter that a machinist of the first class is supposed to understand I would defer to his judgment. If Lauste had proposed to connect directly that upper sprocket wheel with the reel, I should have considered it a fool suggestion, but I would have explained to him why it was that the thing was impossible.

XQ99. Did he suggest the final connection

shown in your Patent Office' drawings for operating the sprocket?

A. I don't know.

XQ100. Did you ever suggest to him, that is, explain to him how you wanted these sprockets driven?

A. Beyond a doubt.

XQ101. How did you tell him that you wanted them driven?

A. I don't know what you mean by the word "how."

XQ102. What I mean is, what did you tell Mr. Lauste as to driving the sprockets? 1676

A. I never would have assumed to direct Lauste to do anything within his province as a machinist, without first explaining to him the purpose I had in mind; having told him what purpose I wanted to accomplish I got his views and accepted them or not as I thought them good views or bad views on the subject.

XQ103. Did you consider it within his province as a skilled mechanic to decide that the sprocket wheels should be driven independently and separately of the reels? 1677

A. No, it was not in his province, which was that of a skilled workman. It was a long time before he had the slightest conception of the machine as a whole.

XQ104. How then did he build the machine? You state that you never made anything like an assembled drawing by which he could build the machine and you state that as a matter of fact Lauste never made drawings for his work and didn't know how to do it?

A. Now the answer to that question is as easy as easy can be, and yet it can't be given in a word

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or two. How to put it into few words I do not know. I could say to Mr. Lauste we want supports for a lot of wheels and reels and we want a sprocket wheel here and another one here, and another one here and another one here, and I want two of these sprocket wheels geared together and I want the other two geared together, all of which is simple enough. He would naturally ask me how far apart and I would tell him about the distance apart I wanted it. Up to this point there was absolutely no necessity of saying anything to him about loops, but probable it is I went through the whole thing and told him what I expected the action of the upper pair of rollers to be and what I expected the action of the lower pair of rollers to be, and so on and so on, until gradually the purpose of the machine which he was utterly ignorant of in the beginning, began to dawn on him. Now at this distance I can't tell particularly when I said this thing and when I said that thing to Mr. Lauste but I tried to give him a general idea of the purposes I had in view and when my words failed to convey my thought to him I sometimes made a little rough sketch to help my words, and he did the same thing when he had unsuccessfully tried with words alone to convey to me some thought in his own mind.

XQ105. To what would you be referring when you would state a sprocket wheel here and another one there, &c.?

A. Do you mean to ask me what was in my mind or what I told Lauste?

XQ106. I mean to say were you referring to a drawing?

A. I was not. After giving him a word picture of what I wanted and helping with my word pic-

ture as far as possible with these little rough sketches I found I had done all that was necessary to enable him to go ahead a certain distance doing the kind of work which he was familiar with and that I was not familiar with because I was not a mechanic.

XQ107. Continuing in my endeavor to find out what parts of the machine you refer to as connections for the leading parts, I will refer specifically to certain features of your patent drawings. Referring to Fig. 2, did you consider supplying the pair of beveled wheels 32 apparently connecting the shutter to the other mechanism as connections which you left entirely to Mr. Lauste to provide?

A. The wheels you refer to are employed always to make a shaft turning in one plane produce a revolution of another shaft in a plane perpendicular to the first. It is such an exceedingly common device that I doubt very much whether we had half a dozen words about it. I might say the same thing in regard to the connection between the sprocket 46 and the sprocket 39. I certainly would not have left him with the privilege of putting in any other connection that I was acquainted with then or am acquainted with now.

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XQ108. But he placed this well known connection in at his own suggestion, did he not?

A. I don't know. I thought I had answered that question a little while ago by saying that the connections were perfectly obvious to any first-class machinist who knew the object to be accomplished, but I doubt if we had half a dozen words about it. I may have said of course we will connect these by beveled gear connections or he may have said to me, of course we will connect these by beveled gear connections, but I do not know who said it first.

XQ109. How about the short sleeve or extension from the left upright shown at the top of Fig. 2. Have you the same answer to make as to that?

A. I confess that I do not at this moment remember what the use of that piece was, unless it may have been used to keep the cord 26 perfectly parallel to that left part of the support next to which the sleeve appears in the drawing. Unless I could know certainly what the thing was intended for, I would not be in a position to say whether probably I suggested it or Lauste.

XQ110. How about the sliding idler 62 shown in Fig. 3?

A. It is impossible for me to tell; the purpose of it is obvious.

XQ111. How about the adjustable screws 51, shown in Figs. 3 and 4?

A. I don't remember what that adjustment was intended for.

XQ112. These screws are intended to shift the shaft 34 on which one of the broken gears is carried back and forth in the eccentric bearing to vary its distance with respect to the other broken gear.

A. As I understand, your question was whether that was suggested by me or by Lauste. The chances are 100 to 1 that was one of Lauste's suggestions. An examination of Fig. 5 will show that for a large part of the revolution of the broken gear wheel 47, no movement is produced in the connecting wheel 48 at all. Now, if those two wheels pressed each other too strongly necessarily, when the third part of wheel 47 was connected with the concave curved part of wheel 38, a movement of 48 would be produced, and as I understand you, this was to adjust these parts. I remember very well

when I first saw a cut of this Geneva sprocket that I was very doubtful as to whether there would be absolute rest of wheel 48 while the curved part of wheel 47 was in contact with it. That however was before we tried it. There may have been something to justify my fear and that screw connection may have been to obviate it, that is to increase or diminish the distance between the two wheels.

XQ113. And to overcome this objection did Mr. Lauste suggest that a suitable means such as the eccentric bearing and adjustable pins should be provided?

A. I can't remember at this distance who suggested that.

XQ114. Do you think the chances are 100 to 1 that he did?

A. My memory is not clear on that point. I am inclined to believe myself that as the manufacture progressed it was I that suggested objections to the running of such parts as did not seem to me to run properly, and that then Lauste suggested a way of obviating the difficulty, and dismantled the machine and made the alterations. That was the general system under which we worked, that when an object was to be accomplished by a mechanical device and I could not myself suggest the mechanical device, I would take suggestions from Lauste.

XQ115. You did not consider this feature any part of your invention, did you?

Objected to as irrelevant and immaterial and as incompetent to this extent that the answer of the witness calls for a knowledge of how much advantage he is entitled to take as an inventor of the suggestions of

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the skilled mechanic employed by him to carry out his ideas.

Objection is made to this manner of prompting the witness by such statements which properly belong in a brief and should not be introduced at such a point in cross-examination. If the inventor is not the person to know whether a particular feature was his invention or not, it is difficult to try to know who is.

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Counsel for complainant will please refrain from discussing the legal deductions to be drawn at this time.

Counsel for complainant: Counsel for defendant has evidently lost sight of the province and privileges of counsel in asking a question which involves a point of law and in overlooking the fact that complainant's counsel is here to preserve as far as possible the legal rights of the inventor and the owner of the patent, and to make timely objections to interrogatories which call in question those rights.

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Counsel for defendant: Counsel for defendant has no objection to timely objections of the proper character as embodied in the first line of the objection, but it is quite clear that the question asked is entirely proper and is not asked for any legal opinion whatsoever, but merely to determine what this inventor considered to be his invention as distinguished from features which an attorney may of his own opinion decide to place in an application as what he believes to be the invention of the inventor.

Complainant's Counsel: And for this rea-

son I object to the question as incompetent as well as irrelevant and immaterial and as an objection to the competency of the question has no force unless the reasons for such incompetency are stated, I exercised my prerogative in stating those reasons. The fault I think is with counsel's question and not with the character of the objection.

Defendant's Counsel: The record will show the obvious relevancy and materiality to the question as well as its competency.

A. I did.

XQ116. Do you know it was the suggestion of Mr. Lauste?

Same objection.

A. Yes, even though it was a suggestion of Mr. Lauste, employed by me to accomplish for me the necessary purpose.

XQ117. Because you believed that anything suggested by Mr. Lauste while in your employment and working for you could be filed in an application by yourself as patentee?

Same objection.

A. Certainly I would if Mr. Lauste was my employed workman and the thing suggested by him and made by him subsequently was suggested and made to accomplish one of my own purposes previously explained to him.

XQ118. But that is not the situation. You testified that there was difficulty with the gear and that Mr. Lauste suggested this means of avoiding the difficulty.

Same objection and the attention of the Court is called to this line of cross-examination which is merely drifting into subtleties of law rather than matters of fact.

Counsel for defendant stands on the record to show the necessity of this line of cross-examination, and its obvious bearing on the issues.

A. With due submission I declare that I did not testify that I had difficulty with the gear, but that in the beginning there was doubt in my mind as to whether this Geneva stop would work efficiently. I stated that my memory was not very clear as to what occurred at the time, but it is possible that upon mounting the Geneva stop and trying it my objection was found to have been well founded and that I determined to abandon the Maltese cross and to adopt some other device to answer the same purpose unless the difficulty that had shown itself could be corrected. Now, whether I suggested the precise means of correcting the difficulty or Lauste suggested it I do not remember, but in either case as an honest man I should not have hesitated to claim the invention as my own.

XQ119. In your former testimony, Q35, you stated that you went to the shop one morning and found Lauste and Kleinert standing together looking at a catalogue of the Boston Gear Works and one of them directed your attention to cuts in the catalogue and asked you if you thought one of them would answer your purpose, whereupon you stated that you did and then directed that the broken gear therein shown be ordered at once, and in your answer to XQ309 you state that not until

the time of the purchase of that gear had I resolved upon any special appliance for producing the intermittent movement. Is this testimony correct?

A. Perfectly so, according to my recollection.

XQ120. Then, as I understand the facts from your former deposition and from your present deposition, you had in mind prior to the time at which Lauste or Kleinert pointed out this particular broken gear, the fact that you intended to employ such suitable means for producing stop and start motion of the film, but that you had not determined upon any particular construction to accomplish this. Is this correct?

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A. Perfectly so, and I would like to explain what seems to be an inconsistency between that statement as to Kleinert and Lauste in a statement that I made yesterday to the effect that I had found the illustration in the Boston Gear Works illustrated price list, and that I had called the matter to their attention. I have no doubt that the prior statement was the correct one, but I remember perfectly well that for a number of days, how long I can't say, Lauste and Kleinert at my request, had been racking their brains to find out something suitable for the purpose and that I had written to a number of manufacturing concerns, the Boston Gear Works among them, and had already received a copy of the Boston Gear Works publication and had gone to the shop to tell Kleinert and Lauste of my discovery and ask them what they thought of this Geneva stop. From the earlier testimony I gave it seems that they got the Jockey word, but that it was in the discussion the question arose in my mind whether it was going to work as efficiently as it was finally made to do.

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XQ121. Prior to this time, as I understand your former deposition, Mr. Dickson had suggested a stop mechanism to you or your sons and you had held out to him an offer of a considerable block of stock of your company if he should succeed in producing a suitable stop device. Is this correct?

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A. No, sir, absolutely incorrect. I never had any money dealings with Mr. Dickson in my life. I undertook to make this machine for the benefit of my sons. That fact I constantly impressed on them, for a long while I refused positively to accept any of the stock for myself. Whatever arrangements were made with Mr. Dickson were made by them because they had the liberty to make them. I remember that one of my sons came to me and told me that Otway had agreed to give one-fourth of the interest to Dickson and told me he thought it was too much. I said, "Oh, well, it is a small matter and if he does for you what Otway says he can and will do, one-fourth of the stock is cheap enough."

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XQ122. Then the facts were that your sons had offered a fourth of the stock to Dickson if he would produce a successful intermittently moving machine. Is this correct?

A. That was my understanding at the time.

XQ123. And with this object in view Mr. Dickson tried to perfect a stop device for the proposed machine?

A. He did not try to perfect such a device but to use a device that skilled mechanics were perfectly familiar with and that had been used successfully for similar objects. He didn't claim to have invented a device, it was an old thing.

XQ124. But he was unable to either adapt from

another art a suitable stop device for moving picture machines or to construct a suitable one himself, is this correct?

Objected to as calling for secondary evidence.

A. I can't say anything about Mr. Dickson's abilities, but I know as a matter of fact that no other arresting device but this one was ever suggested by him to me directly or indirectly. And that I never saw or saw anybody else that had seen the machine that my son Otway had told me that Dickson told him he had already at his home in Jersey. I want to say in Mr. Dickson's behalf that he was a very enthusiastic man and was very apt to confound what he was perfectly confident he could do with what he had already done.

XQ125. He failed, however, under this offer, to produce for your sons an operating stop device for these machines?

Objected to as containing a statement of testimony that does not appear to be correct.

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Adjourned to Saturday, April 29, 1911, 11 A. M.

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New York, April 29, 1911.

Met pursuant to adjournment.

Present: Counsel as before.

Cross-examination of Mr. Latham continued:

Counsel for defendant believes that the statement of the testimony in his question is a correct one, as he understands it, but in order that there may be no misunderstand-

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ing of his question and what he intends thereby, he will state the testimony more at length.

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XQ126. In answer to XQ122, you stated in substance that it was your understanding at the time, that your sons had offered a fourth of the stock to Dickson if he would produce a successful intermittent machine, and in answer to Q51, you state that Mr. Dickson suggested an arresting device, and in your former deposition you have testified that the stop device was a failure. It is correct then, is it not, that notwithstanding this offer of a fourth of the stock held out to Dickson by your son, to produce an intermittent machine for them, he failed to produce for your sons such a machine and failed to produce a suitable stop device for them?

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A. In the preamble to the question just put to me it is stated that I testified at some time that Mr. Dickson suggested an intermittent device. That is not the fact. The facts are these: The information I had from my sons was that they, in the presence of their lawyer and Mr. and Mrs. Dickson and their lawyer, had closed the contract with Mr. Dickson, to give them and the machinist Lauste full descriptions of an efficient machine that he had already invented and desired it understood at the time, had already put into bodily shape. Instantly, I backed out from any interference in the shop whatever, and my son Otway came to me and told me that Mr. Dickson had insisted that prior to his giving to them the description of his invention or the embodiment of it, that he should be permitted to try a certain stopping device and my son told me he had granted Dickson

that privilege. To answer your question, I will say that I know the stopping device failed and that I never had any information going to show that Mr. Dickson had given to my son either the description or the embodiment of an effective machine for photographing movement.

XQ127. To your knowledge, did he ever give them a satisfactory stop device?

A. Never.

XQ128. Do you know whether or not during this time and for some time preceding this time, that Mr. Dickson was engaged in developing moving picture apparatus for Mr. Edison?

A. I do not.

XQ129. He was employed by Mr. Edison, was he not?

A. I was so informed by my sons and subsequently by Mr. and Mrs. Dickson themselves.

XQ130. Did Dickson ever convey to you the idea that he at that time had knowledge of Mr. Edison's intermittent stop device?

A. Never.

XQ131. Then from the time of your conception of this machine, until the time that you ordered the Boston Gear Stop movement, you were "casting around" for a suitable stop mechanism that could be satisfactorily operated in moving picture machines?

A. That is the fact.

XQ132. It was by no means apparent to you, was it, that any particular stop mechanism used in other arts could be satisfactorily adapted to this peculiar art?

Objected to as irrelevant and immaterial
and also as incompetent in that it does not

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inquire for a material fact but a mere opinion of belief upon the part of the witness.

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A. I do not think I understand the question. If you mean to ask me if it was apparent to me, that is, if I knew beforehand, that it would be possible for me to find an arresting device used in some other machine for some other purpose than the one I had in view, my answer is it was not apparent but as I had failed in my imaginings to hit upon anything that seemed to me suitable, I tried to find out if in other connections a stopping device had been used that promised to answer my expectations.

XQ133. Various well known stop mechanisms that had previously been used in other arts are entirely unsuited to this particular art, are they not?

Objected to as irrelevant and immaterial and as calling for an opinion and not a statement of fact.

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A. At least one of them, I found in practice to be so nearly absolutely suitable that I adopted it. Its use originally, I have been informed, was by Geneva watchmakers, to prevent the overwinding of a watch and so came to be called "Geneva stop."

XQ134. Is that the stop movement ordered from the Boston Gear Works?

A. Yes, substantially. It is to be called to your attention that the driving roller of the two is sometimes placed within the driven roll, the teeth of the driven roller being made on its concave side and my impression, now that I have thought about it a great deal, is that the stop first got from Boston Gear Works was of this kind. It is also my recollection that their catalogue showed one called by the same name, "Geneva Stop," with the driving

roller outside of the driven roller. Now, which one of these forms was employed by the Geneva watchmakers, I am sure I do not know but I know that the form I finally adopted was the one of the form last mentioned. In principle, they are precisely the same.

XQ135. And in operation, identically the same?

A. I notice the meaning of the word "identically" carefully and I am inclined to think that if we had found that the first form mentioned above acted for our purposes with perfect satisfaction to us, we never would have adopted the second form because the first form occupied smaller space, and of course, we wanted to make the machine of as small bulk as possible.

XQ136. Is your memory refreshed as to the true reason why the substitution of one form for the other was made, if I state that it was found that on account of the size of the gear ordered from the Boston Gear Works it was not put in the machine, but was tried on a temporary device at which time it was broken, and that it was cheaper to make the latter type which was finally adopted?

A. No more refreshed than it was when I gave my last answer.

XQ137. Prior to February, 1895, did you know of or had you heard of Mr. C. Francis Jenkins or Mr. Thomas Armat?

Objected to as irrelevant and immaterial.

A. I did not.

XQ138. Did you ever hear of or see a machine claimed to be made by either of these parties?

Same objection.

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A. A long time, how long I am unable to say, but after my pictures had been publicly shown for pay to probably a hundred or more thousands of people here in the City of New York and elsewhere, I heard of a machine that Jenkins and Armat claimed to have invented and still later, if I remember correctly, Mr. Dickson invited me to go with him, which I did, to Koster & Bial's Theatre, where he said I would see the pictures projected on a screen by this machine. I would like to add, that just now, when I used the expression "If I remember correctly" it was meant to apply only to the question whether Mr. Dickson invited me or not. Mr. Dickson was at the theatre with me and I believe one or two of my sons were there also. I still think Mr. Dickson invited me but I am not certain about that.

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XQ139. Did you ever hear of a Mr. Chinnock, prior to February, 1895?

Same objection.

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A. I cannot recollect that I ever heard of him before in my life.

XQ140. Did you, prior to February, 1895, ever see or hear of a moving picture camera made by Mr. Chinnock?

Same objection.

A. It seems to me that my previous answer includes answer to this question. I will say, however, that I and my attorney did and have done prior to the date mentioned, as well as subsequently, endeavor to find out who in the world had attempted to do what I was trying and copies of a

multitude of patents from this country and abroad were sent to us. There is a shadow of possibility that a patent may have come into our hands in the name of the man you have mentioned represented as a patentee but I cannot possibly recall the name now.

By Complainant's Counsel:

My attention has just been called to my failure to formally offer in evidence British patent 4841 of 1896, referred to in Q47 of the deposition of this witness. I now offer the same in evidence and will request that it be marked "Complainant's Exhibit Latham British Patent, 1896."

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XQ141. In answer to Q51, you state that you made at first one machine and one machine only, that this machine had an arresting device, and that the only machine you ever made with an arresting device was the machine known as No. 12 in your former deposition, and you further state that before completing this machine, a number of experiments had been tried in the shop with a number of temporary appliances, such as the arresting device suggested by Mr. Dickson, and in answer to Q45, where you were asked, if you had any projecting machines of your own make when you first used your taking machine, Exhibit No. 12, you stated that you had none perhaps, one or more temporary things set up for experimental purposes and in answer to Q46, you state that some of these were the continuous and others of the intermittent feed. Now, in order to get this matter right, I wish to know if the machine referred to as Exhibit No.

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12 was the first machine you ever had embodying means for forming the loop, together with intermittent mechanism for moving the film.

A. It was, if temporary devices are not included in the word "machine."

XQ142. What do you mean by temporary devices? simply stop mechanisms geared to a sprocket to intermittently move a film?

A. I mean or meant nothing in the world about the movement of films but if, for example, I wanted to try a certain stopping device, we could easily, with our appliances in shop, set up a shaft bearing a wheel that we wished to start and stop at intervals and to set up in connection with this wheel the stopping device we intended to employ. In no case, so far as my memory serves me, was it necessary for us to go to the extent of projecting this intermittent movement on a screen to enable to make up our minds whether a stopping device was suitable or not, because in every case there was a visible exhibition to us, that is, in every case where the stopping device was rejected, a quivering of the shaft that we desired to be absolutely still during stopping periods. Other features that we intended or wished to incorporate in a machine which is known in this examination as Exhibit No. 12 were tried in a similar way.

XQ143. About how many of these stop devices do you think you tried at that time prior to the final assembling of machine No. 12?

A. I don't know.

XQ144. Have you any idea at all on the subject?

A. No more idea that I have of the number of people I met this morning coming to the case here where my testimony is taken.

XQ145. In your present deposition, in answer to Q54, you stated that you were an invalid at the time that the swinging lamp was photographed and that you were confined largely to the house and had not been to the shop quite a considerable while. How long prior to this time, February 26, had you been ill?

A. My recollection is, that the answer of mine given heretofore about my physical indisposition, did not contain the positive statement by me that that physical indisposition covered any particular period marked by a certain doing in the shop except the night of February 26th, when the picture of a vibrating electric lamp was photographed. So far as the balance of the sickness is concerned, it extended over a considerable while. My recollection is that I referred to that as possibly a reason, not certainly, why I could not give certain definite information such as had been inquired of me. At any rate, if I did not so refer to it, I ought to have done so, because it is utterly impossible at this distance to remember clearly about the sickness period in its relation to anything that went on in the shop, except the photographing of the swinging electric light.

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XQ146. In my last question, I quoted your exact testimony but I do not think that your answer is inconsistent with that, since I did not state that your sickness had covered any particular period, but that you testified that you were absent at that time and you had testified that the absence had been for a considerable period and in your last answer you state you do not know positively what that period was. Then in your answer to Q64, you stated that you told your son that you would prefer they got Dickson to direct Lauste but that you

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wanted your son Otway to be present at the interviews between Lauste and Dickson to see exactly how the cat was jumping. I infer from this testimony that you were absent from the shop for days at a time during the construction of this machine, Exhibit No. 12, and that the matter was left largely to your son, Lauste and Dickson. Please state what the facts are, in regard to this.

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A. In answer to the first paragraph of the preamble to that question, I want to say that so long as my sons were waiting on Dickson, to make a machine for them, I purposely kept away from the shop. This statement of mine about the cat's jumping applied solely, exclusively, to the time when I was keeping my hands off and my sons were waiting for Dickson to carry out what they told me he had obligated himself to do for them. It had nothing in the world to do with the structure or the use of so-called Exhibit No. 12. So far as my absences from the shop at any time during the construction of the so-called Exhibit No. 12 are concerned, it is utterly impossible for me at this time to make any definite statement.

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Adjourned to Monday, May 1, 1911.

New York, May 1, 1911.

Met pursuant to adjournment.

Present: Counsel as before.

Cross-examination of Mr. Latham continued:

By Mr. Ward: In view of the fact that the prior depositions of Netter and Lauste,

which have been introduced by counsel for complainant were in the form of certified copies, it was taken for granted by me that when counsel for complainant offered in evidence the former deposition of Woodville Latham, it would also be in the form of a certified copy of said Latham's deposition and of his deposition only, separate from any other deposition. Since adjournment, I have learned from counsel for complainant that he intends that the former testimony shall be in the form of an alleged printed copy which appears to be the transcript of the record from the Commissioner of Patents to the Court of Appeals. In view of this, and without waiving the former objections on the record, the introduction of this deposition is additionally objected to on the grounds, first, that it is an unauthenticated copy of what purports to be a printed copy of the former deposition; secondly, on the ground that it is bound with other and extraneous matter, entirely irrelevant and incompetent in this case and which is entirely out of place in this record. It is to be noted in this connection that the witness has stated that he has not read this deposition and even if he had, it would not entitle complainant's counsel of the use of it in evidence.

By Mr. Page: In view of this sudden and highly technical objection made by defendant's counsel, I desire to call attention to the fact that under an understanding with former counsel for the defendant, which has been lived up to until the present time,

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neither side has heretofore been required to make formal proof of either patents, publications or depositions, offered in evidence in uncertified form and no objection having been made to this when it was offered, the objection is not considered as timely. Attention is also called to the fact that because the depositions of this witness and the two depositions of Otway Latham and Grey Latham, which were offered in evidence, happened to be contained in a bound volume of the transcript of record, it is quite immaterial and does not constitute a valid ground of objection because the other matters bound up in the same book are not in any way in the case. Now, I put the question directly to defendant's counsel whether in view of the circumstances of the case, and in view of the fact that he or his associate have used this record for some weeks now as a basis for cross-examination and he or his associate has stated that he has a copy of it, whether he intends to stand on this objection and to put me to the wholly unnecessary trouble and inconvenience of having this record certified by the Commissioner of Patents. Upon this answer will depend my future attitude towards defendant's counsel in similar matters.

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By Mr. Ward: I am not aware of the precise terms of the understanding referred to but I do know that while copies of patents and publications have been admitted in evidence without being certified, I am not aware of the fact that any former deposi-

tions have even been attempted to be introduced into the case without first being certified and I may state further that it was at the instruction of former counsel for defendant, referred to, that this objection is made. As to statements by complainant's counsel, as to our possession and use of the record referred to, I can say for my part that I have never had such a record in my hands before that I know of and certainly not this purported copy, nor have I ever seen or heard of a copy of the record being in possession of my associate, until just now mentioned and I do not believe that he is in possession of any such copy. I have had access to and charge of what I believe to be papers relating to this case in our office and I know that I went to the expense of expending something like \$300 to obtain a typewritten copy of certain of these depositions from the Patent Office, so that I believe complainant's counsel is mistaken in his assertions and in view of the premises, I will stand on the objection made.

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By Mr. Page: Counsel for defendant is notified here that this action is taken as a violation of previous understanding and agreements and that hereafter complainant's counsel will insist on the strictest compliance with the rules in regard to the certification of all patents, publications and other documents offered or to be offered by him or by his firm as evidence in this or other cases, in which complainant's counsel appears as a representative of one of the parties contesting.

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By Mr. Ward: Counsel for defendant wishes to state that he does not consider the present objection any violation of an agreement to admit patents and publication uncertified. It also appears that complainant's counsel has not considered that depositions come within whatever agreement was made, as shown from the fact that heretofore as far as I am aware, he has always introduced such depositions in the form of certified copies which it seems he would hardly have gone to the expense of doing if he thought it unnecessary. It is further stated that in view of this, counsel for complainant is expected to live up to his agreement and counsel for defendant feels that he has a perfect right to continue to introduce unc�포certified copies of the patent and publications in evidence with the same legal effect as if they were certified copies.

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By Complainant's Counsel: The remarks of counsel seem to be childless and absurd. I had no copies of any deposition in the former Latham-Armat Interference, when I ordered from the Patent Office certified copies of the depositions of Lauste and Netter, the former of which does not appear in the transcript of record to the Court of Appeals of the District of Columbia. Having these depositions at hand, they were offered in evidence.

I desire further to state that my agreement with Mr. John W. Munday was that neither side should be called upon to make specific proof by certification of matters that were a mere form and where failure to so

prove was a mere matter of inconvenience. Whether Mr. Eyre intended to observe this agreement I cannot say, but I do know that I have repeatedly mentioned the matter to him when asked to admit uncertified copies and have repeatedly expressed the willingness to relieve him of the necessity of proving such papers when such proof was purely a matter of inconvenience.

By Mr. Ward: It is thought my remarks should be judged by the facts on the record and not by what may have been exclusively within the personal knowledge of complainant's counsel.

By Mr. Ward: I note that counsel for complainant has recovered and introduced in evidence a great many of the paper exhibits of the former Interference and he is asked if he can also produce the former Latham exhibit introduced as Lauste Sketch of First Operative Machine.

By Complainant's Counsel: I believe I have now offered in evidence every exhibit of any kind that was used in the former Interference, that is, at the present time, in existence. The history of the other exhibits will be proved by competent testimony at the proper time. At present, I have no other of these exhibits and know nothing of them whatever.

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XQ147. Mr. Latham, was original machine No. 12, as built, in the form of a camera or a projecting machine?

A. It was finally, when we had determined for sufficient reasons not to use it for exhibiting pic-

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tures, of course it was rigged with a photographing objective rather than with a projecting one. I remember no other changes that were made. Of course, there were certain parts that were arranged to guard against extraneous light, when we were using the machine to make pictures. This was not necessary when we were using it to project pictures.

XQ148. Did it have a horizontal slideway and a condensing lens to be used as a projecting machine?

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A. I don't recollect about slideway, but in using the machine for projecting a condenser was necessary.

XQ149. In the original machine as completed in March or April, 1895, was the apparatus arranged horizontally as shown in Fig. 1 of your patent?

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A. I do not understand the question. All such apparatus is arranged horizontally in a sense, or nearly so. If I were to assert positively that the slideway was not included, I would not fear contradiction. There was only small use made of it as a projecting machine. We very early determined not to use it as a projecting machine and it would have been a most senseless thing to equip it with expensive appliances that are necessary only in a projecting machine.

XQ150. Did you have to alter any of the parts in changing it from a machine for taking pictures into a machine for projecting pictures or vice versa?

A. One of the greatest difficulties we had was in finding a perfectly satisfactory objective for projection. For instance, the lenses ordered from Colt

were quickly discarded. From the establishment of Bausche & Lomb, I was privileged, without cost to me, to try any objective they made no matter how expensive. Now, my impression is, that while we were trying to get a suitable objective a photograph was made of that swinging light heretofore referred to. I think I have already stated that a lens suitable for projecting would almost certainly be unsuitable for photographing and vice versa. My recollection is that we had no serious difficulty in obtaining suitable photographic lenses.

XQ151. In Q60 of your present deposition, you have testified that Netter made the Patent Office drawings of the application of the patent in suit from original machine, No. 12, and Mr. Netter in his deposition has also testified to that effect. Do you feel certain that the application drawings were made from this original machine, as stated?

A. If I was understood to testify so, with reference to so-called exhibit No. 12, I was understood incorrectly because the application to which reference has been made in the question, was not made until after my connection with the business had been absolutely settled. I remember to have made a general statement to the effect that Mr. Netter made drawings not of my ideas but of machines after they had been constructed. At the time this application was put in, exhibit No. 12 was in no sense mine or under my control.

XQ152. I do not see the responsiveness of your answer to my question. In Q60, you were asked if you knew whether the machine from which Netter made these drawings was the same machine that was tested by your son and Dickson, on February 26. In answer, you replied, "Mr. Netter made the drawings from what I have again and again called

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the original machine." Is this correct, as far as your present recollection goes?

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A. In answering the last question, I did not think I had been so definite even as my answer to Q60 would seem to indicate, but notwithstanding the fact that the drawings in the patent in suit contain a multitude of things that I am almost absolutely sure of were not contained in exhibit 12, I still insist and the Patent Office would insist beyond a shadow of a doubt, that the two drawings in the patent in suit and the exhibit No. 12 were in all essential particulars identically the same machine, not something like one another but each one containing every essential part necessary to be employed in producing intermittent movement of the film and in forming one or two loops to prevent rupture of the film and for other purposes. So far as whether the drawings were made from exhibit No. 12 or some other machine, I don't know.

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XQ153. In your former deposition, Q288, you stated that the patent drawings (speaking of the patent now in suit) were made from a machine substantially after the pattern of the original machine. Do you recall anything in regard to that?

A. I should not hesitate to make the same answer now as I made then.

XQ154. In answer to Q17 and 51 of your present deposition, you state that you had made one machine and one machine only embodying the intermittent feed, and in your former deposition in answer to XQ47 and I believe elsewhere, you stated that you made two other machines in the Fall of 1895, substantially identical with the machine exhibit No. 12. What have you to say in regard to this?

A. I stick to that original answer, in the former deposition.

XQ155. Your former deposition is correct then in this respect notwithstanding your most positive assertion in your present deposition in answer to Q51, "I made one machine and one machine only at first. * * * The first machine that I made with an arresting device and the only machine that I ever made with an arresting device was the machine referred to as Exhibit No. 12.

A. If you will only re-read the answer of mine that you have just read and substitute for the word "made" the word "invented" you will get my answer as I intended it to be.

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XQ156. It is not my function to substitute words in your deposition. Do you mean to be understood that the answer to Q51 is not correct as it now reads, but should be as indicated in your last answer?

A. I mean nothing of the sort. What I meant can be understood from a remark or two I am about to make. It is in evidence that I made, that is, mechanics in my employ made, subsequently two other machines to work together for a special purpose. Now, I say, that if these two other machines could be proved to have included a stopping device other than the Geneva stop, which nevertheless worked efficiently, the three machines could be properly spoken of as being substantially—mind I mean by substantially, in every necessary particular—as made after one pattern. A man who had secured a patent on a machine including the Geneva stop, certainly could not get a patent on another machine including every feature of the machine with the Geneva stop except another

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stopping device instead of the Geneva stop. He might get a patent on the new stopping arrangement but couldn't get a patent on the whole machine. I would beg the privilege of adding the general remark, I do not believe that the drawings exhibited in the patent in suit contain a single feature, even down to the horizontal rod, that I myself did not invent. I read over the description and examined all the drawings carefully this morning early for the first time, certainly since the patent application was made, and I made the examination with almost the only purpose of finding out if there was anything in the drawings that have not been made by a mechanic or by mechanics employed and paid by me.

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XQ157. Mr. Latham, your remarks on patent law and the question of invention are not responsive, to say the least, to my question. It is not in your present deposition that you made any machine other than Exhibit No. 12, containing an intermittent stop. You have distinctly testified that you made only one machine having an intermittent stop. I simply want to know as a matter of fact if you did not have two other machines embodying a stop mechanism as formerly testified to.

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A. I certainly must have misunderstood the question, to which it is said I declared that I had made only one stop movement machine. Some considerable while after that was made, it was reported that there was to be a prize fight in Texas between two noted prize fighters of the day, and one of my sons suggested that it would be a good thing if we were to go down there and photograph that prize fight. It was his opinion and mine at the time, that there was no other machine in existence than mine that could do such long work.

We made these two machines to stand side by side on one table and they were connected electrically in such a way that if in the progress of the work of photographing with one of them it should happen to break down, the pressing of a button on the table would instantly start the other. Each machine carried, if my recollection serves me, an abundance of film for photographing a fight as long as the longest in duration that anybody imagined this Texas fight could be. As a matter of fact, the fight didn't come off. My son, Grey Latham, who had Lauste with him, then proceeded to the City of Mexico and photographed a bull fight specially arranged for him by President Diaz, to whom he had taken letters of introduction and the length of film photographed was about 5,000 feet long, sent in dark boxes from Mexico to New York. The boxes were opened by the Wells, Fargo Express Co. on the border and half of the film was ruined by the light admitted. The other half, about 2,500 feet, was shown to thousands and thousands of people in a building that stood on the ground where the St. James Building now stands.

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XQ158. In your former testimony, in answer to Q489, you stated that "it is true that a patent had been granted to Mr. Edison for such an appliance (speaking of a projecting machine) but that the drawing represents what is absolutely impossible in optics." Do you know whether or not that patent showed a machine with an intermittent or a continuous feed device?

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A. I recollect nothing in the world about it, except that as you ask the question, I remember that I had on a number of occasions made similar remarks about Mr. Edison's patent and I am absolutely certain that I had answered the question as I am reported to have done. I should say, however, that I cannot at this moment recollect having ever seen a patent given to Mr. Edison or an application made by him for a patent on a machine including an arresting device.

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XQ159. You were familiar at this time, namely, in the fall of 1894, with Edison kinetoscope?

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A. Not the inside of it. I am not sure at that time whether I had ever seen one of the kinetoscope exhibitions. My present impression is that I never saw the outside even, of this kinetoscope till my two sons began to use the kinetoscope in exhibiting pictures. Even then I had no curiosity to see into the machine because it was a continuously moving machine and I think I have said more than once that we never had any difficulty in constructing the projecting machines, except difficulty in getting suitable lamps and suitable objectives. Of course, I am speaking from memory.

XQ160. As I understand it, your sons had these kinetoscopes which you mention in the summer of 1894, and as I understand it, it was at one of these exhibits that you decided that more than one person at a time should be able to see the pictures. Do I understand that you never saw these exhibits that your sons gave?

A. I don't know what your understanding was but I will tell you what the facts are. That a very few days after my sons began their exhibition at No. 83 Nassau Street, my conversation with my

son Otway Latham, about making a projecting machine, was had and I have testified a few moments ago that even after I had agreed to make a projecting machine for my son, I did not look into Edison's machine to see how it was made, first, because it was not a projecting machine, and second, because I felt such entire confidence in my ability to keep my promise to my son, that I did not want even them to think, after I had kept my promise, that I was beholden to Mr. Edison or anybody else.

XQ161. Where did you get your information that the kinetoscope machines contained sprocket wheels?

A. From having had scraps of the broken film shown to me by my sons.

XQ162. Referring to your former answer to Q49, you would not have made the statement that the drawings of Edison's projecting machine represented what is impossible unless you had seen the patent, would you?

A. I was mistaken just now in saying that I had never seen a patent drawing of a machine including an arresting device made by Mr. Edison and purporting to be suitable for projecting pictures on a screen. The testimony I gave in 1897 was in matters where mere memory is concerned, more reliable, perhaps than my memory of things to-day, 16 or 17 years later is. If I said then of a patent application of Mr. Edison's that I had seen that it was impossible in optics, I said what I knew to be a fact and if I could see the same drawings to-day, I am absolutely sure that any physicist of respectability would endorse my opinion. The probability is that if a patent was subsequently given to Mr. Edison, it was based on drawings very different from what I saw.

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Woodville Latham.

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XQ163. In testifying in regard to the different elements of your machine as being suggested by you or by Lauste, you stated in answer to XQ103 that "It was a long time before he had the slightest conception of the machine as a whole," and in answer to Q104, in mentioning the probable manner of giving instructions to Lauste, you state that instructions were given in this way until gradually the purpose of the machine which he was utterly ignorant of in the beginning began to dawn on him. How long do you think it was after Lauste started actual work on your machine No. 12, before he had a full conception of the construction you had in mind?

A. God only knows.

XQ164. Have you no idea at all?

A. Absolutely none at all, not any more than I have of how many wagons have passed this window in the last hour.

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XQ165. In answer to XQ209 of your former deposition, you state that "I think I have also testified as to the circumstances under which for something like two months, namely the months of November and December, 1894, Mr. Dickson had been employed by my sons to construct such an apparatus as they desired" * * *; and you have testified in your present deposition, XQ146, that so long as your sons were waiting on Dickson to make a machine for them you purposely kept away from the shop. Is it a fact then, that while Dickson was having these experiments conducted or was conducting them himself during this period mentioned, you did not suggest any ideas of yours or supervise the construction of apparatus according to your ideas?

A. When I said I purposely kept away from the shop I did not intend it to be understood that I never went to the shop because I did go occasionally but I considered myself at that time merely an outsider. I knew Dickson intimately. It is even possible that I may have commented as friend to friend on the stopping device he was trying to make work, that was the only thing, according to my recollection, that he experimented with in the shop. Whether the period lasted two months or two weeks or two days, I do not know but any testimony as to length of time and sequence of events that I gave in 1897 was more apt to be reliable than anything I say from memory now.

XQ166. Work on the construction of your machine, that is, work directed to the carrying out of your ideas as embodied in your original machine was then commenced after Dickson's experiments were concluded. Is this correct?

A. According to my best recollection, it is very incorrect, because there were certain parts of the machine, the supports for example, that all of us knew would be used, whether one device or another should be adopted for arresting the movement of the film. Dickson did not always need Lauste's services. A good many parts of the machine were made outside and according to my best recollection, at the time when I took hold and Dickson withdrew, every part of the machine had been devised and settled upon and most of them probably had been made except the stopping device.

XQ167. How is it in answer to XQ146, you state that so long as your sons were waiting on Dickson

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you purposely kept away from the shop and that you were keeping your hands off at this time and your sons were waiting for Dickson to carry out what your sons told you he had obligated himself to do for them?

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A. If what I said just now is true, that from the very beginning my son Otway Latham and myself had determined that certain parts of the machine had to be made so and so, no matter what stopping device might be adopted, bear in mind that when Mr. Dickson began to experiment with a stopping device, I was already acquainted with it, that from the very beginning I was absolutely certain that it would fail to answer our purposes, that I so stated to my son Otway, that I said to him "Of course, Dickson has the privilege of using Lauste all the time he pleases but as a matter of fact he is doing a good deal of his experimentation according to what you tell me, without Lauste's assistance and it is of the highest importance that we shall waste as little time as possible. Therefore, my advice to you is, that you have Lauste make or ordered made outside all the parts of the machine that you and I know are already decided on, whether one stopping device or another stopping device he adopted. I do not myself believe, and he replied that he did not believe that Mr. Dickson had any machine over in Orange already devised or possibly made to answer the purposes we had in view. We did not believe that Dickson had deliberately lied but we were satisfied he had imagined impossibilities.

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XQ168. In answer to present XQ74, you testified that Lauste never made mechanical drawings of his work and that he didn't know to do it. How is it that in your former deposition in answer to XQ141, in speaking of drawings of machines you

were then building, you stated that "prior to the time when the shop passed out of our control, I frequently saw such drawings in the possession of Eugene Lauste, the mechanic who made them."

A. I never in my life saw a mechanical drawing made by Lauste, that is, what a mechanic would call a mechanical drawing. The only thing in the shape of a drawing that could by any possibility have been claimed as his, were miserable little sketches which I made for him from time to time because he couldn't understand my English and which he made for himself, but at this time, when my connection with the business was broken, I had with me working with Lauste, a man by the name of Wiet who was a most accomplished mechanical draughtsman and he had a multitude of drawings, my recollection is, relating to my affairs which passed out of his possession precisely as my interests slipped into other hands. Any answer I have made heretofore about mechanical drawings referred to Wiet drawings, not to Lauste. Mr. Wiet told me that though he had worked in various shops in different parts of the world, he had never before come across a mechanic who like Lauste, did such superb work without the help of working drawings and it seemed strange to him that Lauste, in his apprentice days had not learned to make working drawings and to work by them.

XQ169. In your former deposition, rebuttal Q17 referring to drawings which Lauste had made of original machine No. 12, you state that those drawings were made by Lauste under my direction a long while after the machine they represented had been constructed and used.* * * They were made

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* * * solely because I was afraid that the building in which the machine was kept for the most part might be destroyed by fire." Would you have asked a man who was only capable of making miserable little pencil sketches to make for you complete drawings, such as would perpetuate the construction of a completed machine of so great importance?

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A. I have never stated here or anywhere else that Mr. Lauste was incapable of making anything else or better than the "miserable little pencil sketches," nor have I stated here or anywhere else that within my knowledge Mr. Lauste ever did make for me either a working drawing or a mechanical drawing. What he did make at my suggestion was such a picture of the machine as would keep him in mind of what the machine was so that if the building should happen to burn up, he would be able to recall to mind just how the machine had been made. I did not expect him to make a drawing that I would understand but one that he would understand and my recollection is that he had to do a great deal of explaining to me before I could get anything like a description in my mind as I wanted him to preserve in his own.

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XQ170. Did you not consider this a mechanical drawing?

A. I certainly did not, and I doubt if a skilled mechanic who had no knowledge of what I had been doing could have known from Lauste's drawing, how to make Exhibit No. 12.

XQ171. I have previously shown you the sketch introduced in this case, marked Complainant's Exhibit Lauste Sketch. Do you not consider it a mechanical drawing?

A. No, and no mechanic would so consider it. That was intended by him some fifteen years after

the machine had been constructed, to show some few of the essential features.

XQ172. Is this what you would term "a miserable pencil sketch?" (showing witness the "Lauste sketch" above mentioned).

A. According to my recollection this sketch is a more pretentious one than Lauste ever made for me or I ever made for him, in our efforts to understand one another, but in comparison with a mechanical drawing properly so-called or a working drawing, properly so-called, I wouldn't hesitate to characterize this as a miserable pencil sketch.

XQ173. Was the drawing Lauste made and which was introduced in your former interference a drawing more comprehensive than this?

A. My recollection is that it was greatly more comprehensive. Of course he introduced in it, as well as he could, every feature of the machine that he thought he might possibly forget and I have no doubt that Lauste himself would have been surprised if anybody had told him that if he and the building happened to be burned up together, that we would be utterly unable to produce the machine. At any rate I felt perfectly certain at the time that unless I kept the general features of the machine in mind, that Lauste's drawing would be of no assistance to me.

XQ174. In your former rebuttal dsposition in answer to Q22, you state that "The elaborateness of the drawing is a clear indication that it could not have been made in two hours by a sick man, sitting upon his couch" (to which I may say Lauste had never testified as to having so made the drawing) and in answer to Q25, you state: "Immediately after going to Beekman Street I pur-

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chased a fine drawing table and other appliances for the use of the draughtsman, and my belief is that these drawings and tracings were made some considerable while after our removal in the Beekman Street shop." And in answer to Q23, you state that the drawings were made up on two sheets of paper. In view of this do you still contend that those were not mechanical drawings?

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A. The drawing table and all the instruments for drawing were made on the request of Mr. Wiet for Mr. Wiet's use and were never within my knowledge used by Mr. Lauste. My recollection is that Mr. Lauste either did testify that he made these drawings as he lay propped up on one arm on his bed where he was sick. If he did not so testify, he certainly said so at the time, in presence of witnesses. Now, see the inevitable inference. Mr. Lauste never had a bed in Beekman Street. He did have a bed in the shop for himself and son in Frankfort Street. It is perfectly obvious that that drawing was made in Frankfort Street, and to me, at least, it is obvious, that it was a complete machine then except in so far that it lacked a suitable projecting lens.

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XQ175. Since you have quoted your impression of Mr. Lauste's testimony, I will state that notwithstanding the fact that you and your attorney, in the former deposition, put that interpretation upon it, Mr. Lauste did not testify that he made these drawings upon a sick couch but that the previous sketch which he claims to have made, I believe in November, was made on his couch, when indisposed. Did you not intend to convey the impression in answering Q25 of your former deposi-

tion, that the drawing showed that Lauste utilized your board and instruments in making them?

Objected to as irrelevant and immaterial.

A. It is doubtless a fair inference from my answer to Q25 of my former deposition. Prior to leaving the Frankfort Street shop, the question of Lauste's ability or inability to make mechanical drawings and working drawings had never come up. I only discovered what his abilities in that line were and what his practice was after I had gone to the Beekman Street place and had employed Wiet. Where I expected that Lauste would be able to use the drawing table or not, I am unable to remember, but I quickly found after I had got the drawing apparatus that he knew nothing about their use and to my recollection, he never did use the drawing appliances at all. All mechanical drawings, all working drawings were made by Wiet. The drawings that were made by Lauste, to save us from harm in case the building burned down, were made in the Frankfort Street shop, and I have not the slightest hesitation in swearing that Lauste apologized for the rudeness of the drawings by saying that he had made them in two hours as he was reclining on his sick bed, so that, as I said just now, the conclusion is obvious, unmistakable, that Exhibit No. 12 was so far completed in the Frankfort Street shop as that Lauste undertook to make a drawing of it that would save us from loss, in his opinion, in case of fire.

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Adjourned to Thursday, May 4, 1911, at 11 A. M.

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Woodville Latham.

New York, May 4, 1911.

Met pursuant to adjournment.

Present: Counsel as before:

Cross-examination of Mr. Latham continued:

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XQ176. In answer to my last question, when I asked if you did not intend to convey the impression that the instruments were used by Lauste, you stated that "it is a fair inference from my former deposition." Now, isn't it more than an inference? Did you not intend to be understood as so testifying?

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A. What I can say is this: The drawing apparatus was purchased for the use of Mr. Wiet, after Mr. Wiet came into my employ. I think perhaps that in the previous answer I have too roundly stated Lauste's inability to use the drawing apparatus. I have no recollection that he ever did. There was never a suspicion in my mind at any time that Lauste used the drawing apparatus. When I said it was a fair inference I meant that it was an inference that people would make who did not know the circumstances. I certainly did not intend to convey the impression that the drawing instruments were used by Lauste because I never heard of his using these instruments, never saw him use them and had the impression that he did not know how to use them. Possibly, however, this impression was an erroneous one.

XQ177. Did you not in your former deposition, cite the fact of the purchase of these instruments while at the Beekman Street shop as showing that these drawings were made by Lauste after you had moved there?

Objected to as irrelevant and immaterial.

A. I think not. I certainly did not intend to.

XQ178. Then what did you mean by the statement that "I purchased a fine drawing table and other appliances for the use of the draughtsman and my belief is that these drawings and tracings were made some considerable while after our removal in the Beekman Street shop."

A. I meant precisely what I said. The draughtsman referred to was a man by the name of Wiet and not a man by the name of Lauste.

XQ179. But you admitted that the drawings in question there were drawings made by Lauste.

Same objection.

A. I do not remember admitting any such thing. I only know this, that I directed Lauste to make some drawings for me, that he gave me some drawings afterwards and a blue print copy of them but my recollection as to the character of the drawings or the elaborateness of them is such or so slight, I should say, that I do not know whether I suspected Lauste of getting assistance in the work or not. If I have just spoken of them as Lauste drawings—as things made by Lauste—that must not be taken to indicate that at any time since I first became acquainted with Lauste I have believed in his ability to make working drawings as distinguished from a mere sketch of an object, like a tree or a house or a bush.

XQ180. Now that you say your memory has been refreshed by reading your former deposition as to these drawings, do you still contend that they were not mechanical drawings?

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A. I am bound most respectfully to deny that my memory has been refreshed, nor have I given it as anything but a vague impression that remains with me that it was nothing but a crude sketch of a machine already completed. If I had access to those drawings to-day and were to find that they could with any sort of propriety be called working drawings, I should certainly in the absence of other proof and Lauste's own words strongly doubt that he had made them without assistance, but as I am just as anxious as Defendant's Counsel that the whole truth shall appear, Mr. Wiet is living, I know him to be an honorable man, I would take Mr. Wiet's word at any time against vague impressions of things that occurred some years ago when he had the same opportunity or a better opportunity than I had of knowing who it was that made the drawings.

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Mr. Ward: In justice to myself, in view of the witness's denial that his memory has been refreshed, I feel duty bound to state that unless I was dreaming when the witness entered the room this morning, he stated that since adjournment he had read over former depositions and found the drawings more pretentious, parts lettered, etc., which he did not previously recall.

The witness states there was absolutely nothing in that circumstance to refresh my memory as to what the drawings really were. There was the one circumstance that either on direct or cross-examination, Lauste was directed to take a drawing which I understood to be the drawing he claimed to have made on my order and to

point out in that drawing what certain things represented and was told that whenever an inquiry was made of him as to a part of the drawing he should mark that point by a letter of the alphabet, and I don't know how I got the impression whether there or in some other of the papers I have read this morning, that some six or eight letters were used.

XQ181. In answer to XQ175 you state positively that these drawings were made in the first shop (Frankfort Street) and that you haven't the slightest hesitancy in swearing that Lauste apologized for their crudeness, saying he made them while sick in bed. Why are you so willing to testify and swear positively as to this?

A. I didn't say I was willing to swear they were made in the Frankfort Street shop. I said I was willing to swear that Lauste apologized for their crudeness or their defects by telling me that he had made them in two hours as he half reclined on his bed. Now, he had no bed in the Beekman Street building. He himself testified that he got out of bed where he had been sick and went to a table and made the drawings and I feel as sure today as I feel of anything that has occurred within my knowledge 16 years ago, that the drawings were made in the Frankfort Street shop where there were certainly no facilities for making drawings that could serve as a safe guide to a workman who wanted to reproduce a machine.

XQ182. Then, why in your former deposition, in answer to rebuttal Q25, did you state that these drawings and tracings were made some consider-

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able while after our removal in the Beekman Street shop!

A. If I so testified, it was either because my memory failed me or else because I drew improper inferences from the things that had been put into my mind and I think troubles of that sort occurred with me oftener than they would have occurred in this examination if counsel would make his questions not so long and not try to include so many things in them. My mind lacks the agility it once had.

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XQ183. But Mr. Latham, the testimony I have just quoted is testimony given by you in 1899, when your mind apparently did not lack agility and when things were fresh in your memory as they obviously are not now.

A. I am in most cases much inclined to the conclusion or to the belief that anything I said in the Interference suit would be rather more trustworthy than what I might say to-day regarding the same matter, but I came to the examination to-day so thoroughly convinced, so absolutely sure that the drawings were made in the Frankfort Street shop

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that I do not think any evidence could be produced to change the impression I now have. I have heard this morning Mr. Lauste's testimony for Castler, that he got up from his bed in the Frankfort Street shop which somewhere else he declared I had purchased for his comfort, and that he had gone from that bed to a table in the room and had made the drawings at that table.

XQ184. Then you have such faith in Mr. Lauste's testimony that you accept it over your former deposition?

Objected to as irrelevant and immaterial and as calling for a wholly inconclusive opinion.

A. That, in my opinion, is not a just inference from what I have said.

XQ185. Your present flat contradiction of your former testimony is based, you have said, on reading Mr. Lauste's former deposition, is this not so?

The question objected to as an unfair statement of fact and as calling for an inconclusive and irrelevant answer. The testimony speaks for itself and I protest against Counsel placing upon it a construction to suit his own purpose.

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By Mr. Ward:

The record shows the flat contradictory character of the two depositions in this respect and I wish to know what the witness is basing his present belief on.

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By Counsel for Complainant:

I deny that the testimony does show a flat contradiction notwithstanding the view of it which Defendant's Counsel entertains and I suggest that Counsel confine himself to asking questions and refrain from stating alleged facts or conclusions particularly on controverted points.

A. I stand on the record.

XQ186. Is this all the answer you care to give?

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A. Absolutely all.

XQ187. Mr. Latham, I think you are entirely mistaken about your belief that Mr. Lauste ever testified that he made these drawings in question while he was sick, but he did testify that he made other drawings earlier than this, I believe in December while sick and when in the Frankfort Street shop. Now, if I am correct, do you still positively believe that the drawings we have been discussing were made in the Frankfort Street shop?

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A. As Mr. Lauste, according to my direct testimony, as well as on cross-examination, never made for me or gave me but one drawing properly so-called, that is, the drawing of the machine known as Latham Exhibit No. 12, I inferred from reading Lauste's testimony this morning that the question put to him and answered by him could not by possibility refer to anything else but the drawing of Exhibit No. 12.

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XQ188. To put the question in another way, and avoid the contention as to how many drawings Lauste made, I will ask you if your statement in answer to XQ175 as to Lauste's apology for these drawings and their having being made while sick, is not based on your belief that the drawing in question is the one that Lauste testified to having made while sick?

A. I don't know what the drawing in question means. If Counsel means to ask me if my impression that Lauste in his testimony in the Interference case, to which reference has been made, referred to Exhibit 12, has had something to do or all to do with putting into my mind the thought that I had in regard to Lauste's apologizing to me, &c., I answer, in my opinion, no.

XQ189. I judge from your present deposition that you did not mean to convey the impression in your former testimony that Lauste could not make such an assembled drawing as would disclose any ideas he might have had, but that your contention was rather, that he could not make "working" or "mechanical" drawings in the strict sense of the term. Is this correct?

A. I think I can say, with the eye of Great God on me, that I never in my life, from my childhood up, have tried by making remarks or answering a question, to produce an impression other than what I thought the words I uttered necessarily would produce. I meant and have meant by everything I have said about Mr. Lauste's ability, that he never at any time during his connection with me, gave me the shadow of a reason to believe that he could make such a drawing (whether properly called a working drawing or not) as would enable a skilled workman to reproduce the machine after it had been completed.—That is—a workman not having already some general notion, at least, of what the machine was. For example, suppose Lauste had already made his drawing for me (which he did make on my order) shortly after Kleinert came into my employ and before Kleinert had had an opportunity to study the machine, and that immediately after this, the machine had got burnt up, my general impression is, that Mr. Kleinert, skilled mechanic as he is, would have been unable to reproduce the machine relying upon those drawings alone and not on information given him by Lauste, myself and my son, verbally.

XQ190. Is it a fact that when you asked Dickson to recommend a mechanic to you, you did not acquaint him with the purpose for which you wished the mechanic?

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A. I may have told him in a general way, I don't recollect. He had so little knowledge of such things that I think it would have been impossible for a considerable while after he came into my employ for me to give him a clear notion of what he was to do, except in parts. He had been recommended to me by Mr. Dickson as being nothing more than a man skillful with tools. Dickson never intimated to me in his life that Lauste was a man with such knowledge of the general principles underlying such apparatus as that he could make a machine suitable for photographing pictures after general directions given.

XQ191. Who employed Lauste at first, you or Dickson?

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A. I did, on Dickson's suggestion, who had told my son that he had a machine he had already made or fully conceived, and that Lauste was a mechanic so skilled that we could not get a better man for our purpose. It is to be borne in mind that when the shop was rented and machinery bought afterwards and all arrangements were made for manufacturing a machine we had in view, that the expectation of my sons and of myself was that Dickson would make the machine or have it made by Lauste and that I should never have the opportunity of posing as an inventor of any such thing.

XQ192. Mr. Dickson states (barring the condenser experiment at Columbia College) "neither by word or action did I have anything to do with their work," referring to you and your sons? Is it true or not?

A. It is not true, and I should like to remind Counsel that at Columbia College, according to my best recollection, there was never any experiment with condensers, but with objectives rather.

XQ193. Mr. Dickson states that when he disclosed his clock stop mechanism to you, he didn't have the slightest intention that you should use it for your work, and that while you seemed to jump at the conclusion that it would be most useful, he pointed out to you that he fancied it would be too slow. Is this true or not?

A. I do not know, but I do not believe a syllable of it.

XQ194. Mr. Dickson states, in speaking of your original machine No. 12, that he particularly avoided examining the same until he received an invitation from you to come over as quickly as possible and examine it, referring to the time of the swinging light episode. Is this true or not?

A. I do not know, but I do not believe a syllable of it. I should be glad to add here that it is very much against my disposition to speak ill of a man when the great ocean lies between us and when we will probably never come together again and when if we did, as young a man as he is, would not think of resenting an insult from a man as old as I am, by physical force, and ordinarily I think the course I am taking now in these answers that I have been giving would be cowardly on my part in the extreme, I cannot help believing that where these statements of Dickson's seem to conflict with statements of mine, that there has been some misunderstanding, somewhere, but I think it might be proved, if necessary, not only that Mr. Dickson from the beginning of the undertaking to the end of his connection with me made very frequent visits to me, not only to the shop, but to my room in the Bartholdi Hotel, and that he always came, according to his own admission, in fear that Edi-

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son somehow or other would discover what he was doing.

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By Mr. Ward: Mr. Latham, I regret that this line of cross-examination is distasteful to you, but Mr. Dickson has made many statements which are inconsistent with your former disposition and which at least in some cases, seem unbelievable, and these statements were made by him believing that the lips of you and your sons were sealed and that there was no one to contradict his remarks. I simply wish to have you state whether or not these statements are true.

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By Counsel for Complainant: All of this proceeding is very wide of the mark and totally unnecessary and irrelevant. The province of the cross-examiner is to ascertain facts and he is at full liberty to do so in the proper way. If there was or is personal animosity between this witness and Mr. Dickson, the Court is not concerned with that fact and it is hoped the cross-examination will be confined to properly ascertaining the correctness or incorrectness of statements made by Dickson without any reference to the understanding that he may have had in making them or the circumstances under which they were made.

By Counsel for Defendant: I think the remarks of Counsel for Complainant are entirely uncalled for in view of my understanding with him and I can assure him that my examination of this witness will be limited solely to ascertaining the truthful-

ness of the facts testified to by Mr. Dickson which I believe it is my province to do.

XQ195. Is it true that you assisted in forcing stock of your company on Dickson which he persistently refused?

A. Absolutely no, it is not the fact. I never forced any stock on him and never gave him any stock, and never gave anybody stock for him, Congar Brown or anyone else, and I have so testified over and over again. I should like, however, to remark in reply to an expression used just now by Complainant's attorney, as to animosity between myself and Mr. Dickson. There was a time when I thought Dickson had not dealt with me very fairly and for awhile I was indignant. Since that time, I have never seen Dickson and I can say without the slightest hesitation that in my heart now, there is not one particle of animosity towards him.

XQ196. Is it a fact that Dickson was not aware of the construction of your camera while it was being built and that the showing of the complete camera was forced upon him?

A. I think I said just a very few minutes ago that such a statement was absolutely false. I say the same thing now, but what my sons did, I do not know, except from their testimony which is on record and from what they told me. It was they that had raised almost all the money that was employed in this enterprise. It was Otway Latham who some days after I had offered to direct the manufacture of such a machine as he and his brother wanted, came to me and told me that they could save me the trouble because Dickson had already at least devised, I understood at the time that he had made a machine that would accom-

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plish the purpose, and that while he and his brother had not as yet secured from Dickson any positive promise that he would put in that device of his, they felt assured that Dickson was so dissatisfied with his position with Mr. Edison that he would eventually leave Mr. Edison and come to them. That Dickson had not refused to sever his connection with Mr. Edison but had said that he would have to consider the matter in all its value, but that meanwhile after a suitable shop had been secured as well as suitable machinery, he would

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come over, my impression is, he said two or three times a week, and direct Lauste. Now, of course under those circumstances, I did not feel like meddling. Still, when Mr. Dickson came to my private quarters, as he frequently did, in the course of general conversation, I think it more than likely, that I told him, as I had told my son, my notion of how the machine ought to be built. Now, if anybody will read Otway Latham's testimony given in the Interference suit, he will see again and again and again statements by Otway of what he did, and one would suppose very naturally,

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looking at that testimony, that he was the man of the concern that absolutely controlled me, his brother, Dickson and Lauste and the whole kit.

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XQ197. Mr. Dickson has testified that during your visits to him and his visits to you, your constant refrain was "Come with us, work with us, I will make your fortune." What have you to say to that?

A. Well, I should say that if Mr. Dickson said these things, he was simply confounding me with

my sons. I have never been one of those men who believes that there are certain fortunes in any enterprise such as we were involved in, all the importuning, if there was any, was done by my sons, and all know about their interviews with Mr. Dickson, except such as occurred when I happened to be present, came from their statements to me. I have no doubt they were extremely anxious to have Mr. Dickson's services as I was.

XQ198. Referring to a conversation between you and himself, Dickson states that "we discussed a curious movement that I had noticed in an old clock, which Mr. Latham jumped at and tried." This is not so, is it?

A. I have no recollection of it. It may be true. One would very naturally hit upon the escapement of a clock or watch as a thing promising to be thoroughly efficient as an arrester, in the movement of the film, but I don't remember if I tried it or not.

XQ199. This was not the stop movement that you testified Dickson himself had tested out in your laboratory?

A. Not according to my recollection. Something, however, on a similar principle in the escapement as a projection from one arm of a vibrating lever that drops between two teeth of an ordinary gear wheel. The gear wheel can't move as long as the point at the end of the lever was between two of its teeth. As soon as that point is lifted the gear wheel moves again, and so on. My recollection is that in the thing that Dickson tried, there was a gear wheel and a bar moving backwards and forwards perpendicular to the face of the wheel. This bar would move in one direction,

1840

Woodville Latham.

get in between two of the teeth of the wheel and stop its revolution, and in moving in the opposite direction, get away from the gear wheel and so the gear wheel would resume its motion. I may be mistaken, but that is my impression.

XQ200. Then, is it correct that when Dickson recommended Lauste to you, Dickson knew that it was the intention of you and your sons to develop a moving picture camera and that he had stated that he had a machine or ideas of a machine which Lauste was to experiment on?

1841

Objected to as a double question calling for a mixed statement of opinion and fact.

A. The thing was disclosed to Mr. Dickson by my sons and they wanted Mr. Dickson to see me and I explained to him more fully what we proposed to do. My recollection is that Mr. Dickson never said to me anything about this machine of his that he was holding in reserve. All that I knew about that, I think, came from my sons. Lauste was not employed by me, at Mr. Dickson's suggestion to experiment on anything that Mr. Dickson had.

XQ201. When was it that you explained to Dickson thoroughly what you wanted to do, at the time you employed Lauste?

A. My recollection is that it was long before the renting of a shop, buying of machinery and employment of Lauste. In other words, long before we had made a beginning.

XQ202. And Dickson knew at this time that you wanted to develop a camera?

A. I have already so stated.

XQ203. You have testified in answer to Q53 that Eastman had to experiment to some extent before

he could assure himself that he "could make for me the kind of film I had called for." Did you receive any letter from the Eastman Company in reply to your order?

A. I did.

XQ204. Have you got that letter now?

A. I have it, found it last night or this morning, I forget which, in one of two boxes I have containing all my papers. While I was searching for that drawing of Lauste on two sheets of brown paper of which so much had been said. I produce the letter herewith.

1844

The letter produced by the witness is offered in evidence and marked as exhibit Complainant's Exhibit Eastman letter. B.
B. Exr.

XQ205. Why did you want the film thicker than the film used in the kinetoscope at that time?

A. For the very obvious reason that I thought it would be less apt to break, and this proved to be the fact. It will be observed that I ordered at the same time about 2000 feet of film of the same thickness as Edison's but wider, because I was in a hurry to use the machine with wide sprocket wheels which I judge now was then ready for the film. Experimentation previously had been made with small scraps of the film used in Edison's kinetoscope.

1845

XQ206. You stated that you replied to Mr. Edison's interview in the newspaper clipping introduced in evidence, wherein he charged that you were infringing his rights and that he had such a machine as you had disclosed to newspaper men. What was your reply?

1846

Woodville Latham.

A. In the first place, I shall have to deny flatly that I made any such statement. The record shows what I stated. I replied in substance that I did not think Mr. Edison would have made such a remark if he had remembered how indebted he was to other people for credit given to him for inventions of one kind or another but that as to his threat of a suit against me for fraud in the contingency mentioned, it was simply puerile.

Cross-examination closed.

1847

Re-direct Examination:

RDQ207. You expressed a desire during your cross-examination, a few days ago, to correct some statement that you had made in your previous testimony. Will you now make such a statement as you wish?

1848

A. My recollection is that it was in reference to a question whether projecting machines with continuously moving film had been constructed prior to the completion of exhibit 12 and that I stated that such projecting machines had not been completed prior to the completion of exhibit 12. Recalling a number of circumstances to my mind, I have convinced myself that I made a gross mistake. I am certain now that at least one machine was completed and that some four others were at least far on the way to completion at the time exhibit 12 was completed. It was impossible for work to be done on exhibit 12 continuously. Castings had to be made, for example, and these castings had to be planed and Lauste, while he was waiting for such parts to be ready to be used, would in many instances, have been compelled to sit in the shop with his

hands in his lap, so that from the very beginning, my recollection now is, that work was done on the two kinds of machine *pari passu*.

RDQ208. Have you now read through your two depositions given in the Interference in 1897, between the application for your patent in suit and Armat to enable you to identify those depositions as they are contained in the printed book which is in evidence as the depositions which you gave in that Interference?

A. I have.

1850

Re-direct Examination closed.

Re-cross Examination by Mr. Ward:

RXQ209. Have you read through the depositions contained in this copy which I hand you (handing the witness record introduced in evidence by complainant's counsel, containing what purports to be depositions in Interference). I mean this very copy?

A. I would like to ask counsel within what period he refers to. Every syllable of it I have read more than once within the last 16 years or rather within the period which has elapsed since the publication was first made and came into my hands. Since the present examination of me as a witness began there are only certain portions which I felt a special interest in that I have read. If you mean this identical book that I hold in my hands, I reply that I do not think I ever read a single line. This is one of a number of volumes exactly like one another issued by the Patent Office and I have and have had one of these books since very shortly after they were published. You hand me an edition of

1851

1852

Woodville Latham.

Shakespeare and say "have you ever read this book?" I would answer "Certainly" and then if the questioner were to try to prove me an untruthful man because he could show that that identical set of volumes could never have been in my hands, I should feel pretty much as I feel now about being pinned down to one particular one of probably a hundred books issued by the United States Government, any two of which are precisely alike.

1853

The latter part of the answer objected to as irrelevant, irresponsible, showing on its face that the witness does not know the circumstances of which he is testifying.

1854

By Complainant's Counsel: Defendant's counsel having raised and insisted upon his objection that the copy of your former depositions contained in this book are not proved to have been depositions given by you in the previous interference, I will ask you at your leisure to read the depositions as printed in this identical book, properly identified by the Examiner and to state to the Examiner in a way that he may properly certify your answer the fact that you have read carefully these depositions and that you find them to be or not to be, as the case may turn out, correct copies of the depositions which you gave in that Interference and of which you state you have had printed copies ever since the testimony was given and printed. Will you kindly do this?

A. I will, certainly.

By Mr. Ward:

The information asked of the witness is thought to be immaterial to the objection on the record.

Deposition Closed.

Signature waived.

Met pursuant to notice.

New York, June 15, 1911.

Further testimony taken in reply on behalf of the complainant.

Present—S. M. WARD, Esq., Counsel for Defendant;

PARKER W. PAGE, Esq., Counsel for Complainant.

EMIL W. KLEINERT, a witness called on behalf of the complainant, having been first duly sworn, testifies in answer to interrogatories by complainant's counsel as follows:

Q1. Please state your name, age, residence and occupation?

A. Emil W. Kleinert, age 44, Cleveland, Ohio, superintendent of the Wilson Dress Hook company of Cleveland, Ohio.

Q2. Have you ever had any experience in the practical manufacture of tools or other apparatus?

A. I am a machinist by trade, and have worked as a machinist and tool maker since I was fourteen years of age.

1858

Q3. Did you ever do any work as a machinist for Woodville Latham, who was formerly a resident of New York City?

A. I was employed by Mr. Latham in December of 1894, and worked at his factory at 35 Frankfort Street, New York City.

Q4. Do you recall the date or the day of the month in December, 1894, when you first began to work at Mr. Latham's Frankfort Street shop?

A. It was on the 23rd of December, 1894.

1859

Q5. Where had you been employed previous to that time?

A. Previous to that time I was employed by Mr. Gray Latham at Boston, Mass.

Q6. Do you recall the particular day when you came from Boston to New York to enter Mr. Woodville Latham's employ?

A. I remember leaving Boston on the Sunday before Christmas.

Q7. How long did you continue in Mr. Latham's employ in New York?

A. As near as I can remember until October, 1895.

1860

Q8. What time of day did you leave Boston?

A. I left Boston about noon.

Q9. And how long was it after reaching New York that you went to work in Mr. Latham's shop?

A. I went to work at Mr. Latham's shop the following morning.

Q10. What was the force at work in Latham's shop when you went there?

A. I found a man by the name of Lauste employed at that factory.

Q11. Was he the only mechanic there at the time?

A. He was the only mechanic there at the time.

Q12. What was he at work on when you came there?

A. He was at work on a machine for taking photographs.

Q13. Was anyone else in or about the shop at that time?

A. Mr. Otway Latham was there.

Q14. Who was Mr. Otway Latham?

A. Mr. Otway Latham was a son of Mr. Woodville Latham.

Q15. What were Mr. Otway Latham's duties about the shop?

A. His duties were to look after the employees at the shop, also to buy stock, etc., as was used round the shop, and also carrying orders for Mr. Woodville Latham to the employees.

Q16. Now, will you please state what you recollect about the condition of the machine for taking pictures which Mr. Lauste was at work on, when you came to the shop and started work, and what particular work you started in on in connection with that apparatus?

A. I found the machine for taking pictures with the movement with which they were trying to obtain a stop for the film. From personal experience I found this movement not to be practical, and started to work on the projecting machine which had already been on the way.

Q17. What was the trouble with the stop movement which was in the machine which Lauste was at work on?

A. The trouble with the stop movement in that machine was that it did not give the required time to stop the vibration of the film.

1864

Emil W. Kleinert.

Q18. Did you ever know who had suggested or devised that particular stop movement?

A. I was told it was suggested by Mr. Dickson.

Q19. Was that Mr. W. K. L. Dickson?

A. Yes, sir.

Q20. Was anything done that you know of in the way of further experiment with the stop motion for this machine? And if so, state what steps were taken, and when they were taken, as far as you can recall.

1865 A. After we found that we did not have the proper stop movement, we suggested several things. Among others an intermittent movement which we saw in the catalogue of the Boston Gear Works. Mr. Woodville Latham authorized me to order such gear if it was necessary for this machine.

Q21. Did you order such a gear, and if so, when was this done?

A. As near as I can remember, the gear was ordered in the latter part of December, 1894, and it was received in the early part of January, 1895.

Q22. Was this gear tried in the machine?

1866 A. This gear was tried in the machine immediately and finding that the size of the gear in connection with the large sprocket wheel wasn't the thing that we really wanted—

Q23. Then what did you do for an intermittent stop movement?

A. To overcome our difficulty, I decided to try a set of smaller gears. I went to the Pearce Company, New York City, and ordered a pair of gearing which I knew would be suitable for our purpose.

Q24. How did this gear differ from that which you got from the Boston Gear Works?

A. The Boston Gear Works gear was an inside gearing, whereas the Pearce gear was an outside.

Q25. Was there any difference in the diameters of the gear wheels in the two sets of gear?

A. There was. The gear of the Boston Gear Works had 14 stops to the revolution; whereas the smaller gear ordered from Pearce had only four stops to the revolution.

Q26. What, if anything, did you do with the gear that you got from Pearce?

A. I fitted the gear on to the proper shaftings and tried it out in the machine.

1868

Q27. What was the result that you got from the use of this gear?

A. The result was satisfactory. We took a photograph of a lighted swinging incandescent lamp.

Q28. For what width of film was the machine that you found at the shop when you came there adapted?

A. The machine that I found as I came to the factory was adapted for what we then called the Edison Film. Mr. Woodville Latham decided that we should use wider films and we made the necessary changes in the sprocket wheels to accommodate a wider film.

1869

Q29. Was the Pearce gear or stop motion used with the sprockets for the Edison film or with the sprockets for the wider film?

A. It was used with the sprockets for the wider film.

Q30. When, with reference to the time that Pearce was making the stop movement, were the wider sprockets made?

A. The wider sprockets were made before Pearce finished his gearing.

Q31. Do you recall now how long it was after you came to Latham's shop that the machine for

1870

taking pictures was finally completed with the gear which you obtained from Pearce and the wider sprockets?

A. Why, it was practically completed on the 26th of February, as we took a perfect photograph on that night.

Q32. Tell what you recollect about the taking of that photograph.

1871

A. It was around eleven o'clock that we took the photograph. We developed part of the negative that night. Mr. Dickson, Mr. Otway Latham, Mr. Lauste and myself were present. After the experiment and leaving the factory, Mr. Dickson, Mr. Otway Latham and myself went to a restaurant near the Bartholdi Hotel for something to eat. It was about three o'clock in the morning when I left Mr. Dickson and Mr. Otway Latham at the Bartholdi Hotel on Twenty-third Street. In the meantime, Mr. Dickson suggested that he would slip the photographs that were taken that night under Mr. Woodville Latham's door as a sort of surprise for the next morning, or rather that morning, when he should arise.

1872

Q33. Do you know anything about the subsequent history or use of that machine?

A. We took several photographs, one for instance of Mr. Lauste, Mr. Gray Latham, myself and a son of Mr. Lauste's, moving about. This photograph was taken on the roof of the factory at 35 Frankfort Street. Also in the early part of May a photograph was taken of a prize fight, as near as I can remember it was Griffio and Barnett. I remember Mr. White being the referee.

Q34. I hand you a photograph, which is an exhibit in this case, marked Complainant's Exhibit Lauste's photograph; state if you know what that represents.

A. I remember this photograph being taken with the machine on the roof of 35 Frankfort Street.

Q35. Will you now describe, as fully as you can from recollection, how that machine, which was used in taking this photograph, was constructed, and how it operated when film was passed through it for taking pictures.

A. Now, I remember having a roll of film on a reel on the top of the machine; this film was fed by a continuous sprocket wheel, supported with a rubber roll to carry the film on to another wheel, through a slide and the next sprocket wheel. The feeding of the first sprocket wheel was to form a loop of this film, so as the intermittent gear would move the film, would allow it to take up the slack which was formed by the first sprocket wheel. The moving of the intermittent gear also the sprocket wheel attached to this gear would form another loop at the bottom of this machine, which was again taken care of by a sprocket wheel and rubber roll attached, so as not to allow any pull of the bottom reel, which was taking care of the film that passed through this machine.

Q36. How were the two sprockets at the top and bottom of the machine driven?

A. The two sprocket wheels—the one at top and bottom—were connected with the set of bevel gears; also connected with the main shaft, so as to allow a continuous movement, which was to form a loop at the top of the machine, at the same time to take up the loop at the bottom of the machine as it was forming as it passed through the slide.

Q37. I hand you now a pencil sketch, intended to represent a film feeding mechanism and I will ask you to state in what respects, if any, the

1876

Emil W. Kleinert.

mechanism illustrated in this sketch resembles or differs from the feeding mechanism in the picture-taking machine which you have just described?

Mr. Ward: Objected to as leading.

A. This sketch resembles the machine that has taken those photographs, including the intermittent gear as I ordered from the Pearce Company.

1877

Q38. In this sketch there are two sprocket wheels shown on opposite sides of the exposure window, and the maker of the sketch described these two sprocket wheels as being connected by a steel belt and rotating in unison; how does that illustration and description accord with your recollection of the machine as it existed at the time when the Lauste Exhibit photograph was taken?

Mr. Ward: Objected to as leading.

1878

A. The connections of the two sprocket wheels, as near as I remember, was at that time connected with a set of gearings, and we found that the sprockets on one wheel were interfering with our film in a way that it would injure the holes in the film and we decided to take these sprockets off—these sprockets on the sprocket wheel.

Complainant's counsel notes that the sketch referred to in the last preceding questions, is the pencil sketch made by Eugene Lauste, and offered in evidence as Complainant's Exhibit, Lauste Sketch.

Q39. Have you had any experience in the making or reading of mechanical drawings?

A. I have had some experience in reading drawings, also in making.

Q40. I hand you now a copy of the patent in suit, and will ask you if you understand from the drawings and descriptions contained in that patent, the construction and operation of the machine illustrated therein?

A. I do, to some extent.

Q41. Now, will you indicate wherein the machine or rather the film-feeding mechanism of the machine illustrated in that patent resembles or differs from the machine which you assisted in constructing in Mr. Latham's shop and which was used for photographing the swinging incandescent lamp on the night of February 26, 1895?

A. I see a change of a roller, marked 56; that appears in a different position. Also a swinging arm, supporting two small rollers, marked 58-57 and 58; as well as a roller marked 54. There appears to be a few more minor changes of this drawing from the machine that was then in operation.

Q42. How much of the machine, which Lauste was working on when you came to the Latham shop, was altered or changed in construction to produce the complete machine which was used to photograph the swinging incandescent lamp on February 26, 1895?

A. The changes that were made from that machine in question was in changing the size of the sprocket wheels to accommodate a wider film, as well as the intermittent movement.

Q43. Were the bevel gears that drove the continuously rotating sprockets altered or changed in any way?

1882

Emil W. Kleinert.

Mr. Ward: Objected to as assuming that the gears were constructed.

A. The bevel gears were not changed in any way, but fitted on to the new shaftings of the new sprocket wheels.

Q44. Did you ever give testimony in any proceeding with regard to this Latham machine before to-day?

A. I have.

1883 Q45. Was that in an interference proceeding in the Patent Office, entitled Latham vs. Armat, a bound volume of the record of which I now hand you?

A. (Examining) Yes, sir.

Q46. At the time of giving your deposition in that case you were requested to examine and were questioned regarding a certain machine which was designated in that case as "Latham Exhibit 12." Do you remember seeing that machine at the time of giving your testimony?

A. I do remember.

1884 Q47. What was that machine?

A. I remember seeing that machine and recognized it as the same one that we took the photograph with on the roof of 35 Frankfort Street, also the Griffon and Barnet fight at Madison Square Roof Garden.

Q48. Have you seen that machine since giving your testimony in that case?

A. I have not.

Q49. While you were working on the machine for taking pictures in Latham's shop in the months of January and February, 1895, was Mr. Woodville Latham himself ever present in the shop?

A. Yes, sir; he spent a good deal of his time down at the factory.

Q50. Did he have anything to say about the construction of the machine, either to you or to Lauste?

A. He did. He very often suggested and made changes, whenever he thought them necessary.

Q51. Did you ever see Mr. W. K. L. Dickson in the Latham shop about that time?

A. I did. I saw him there several evenings.

Q52. Did Mr. Dickson, to your knowledge, make any suggestions or give any directions about the construction or development of the machine?

1886

A. Mr. Dickson gave very few instructions about the development of the machine. His main business was the taking of the photographs and developing them and teaching us how to do that.

Q53. Had you ever done any work for Mr. Edison on his machines for taking photographs of objects in motion?

A. I have never been employed by Mr. Edison on his machines for taking photographs. I have been employed at the Edison Phonograph Works, as a tool-maker, also was foreman at the works, having charge of the construction of the Kinetoscopes.

1887

Q54. You were familiar with the construction of the Edison Picture Taking Machine, were you not?

A. I was. Through accident, I found out the movement which Edison had used at that time on his picture taking machine.

Q55. Why did you not suggest to Mr. Latham that movement or adopt that movement in the construction of the Latham machine?

A. After I found out that Mr. Dickson was still at that time employed with Mr. Edison, Mr. Dick-

1888

Emil W. Kleinert.

son and myself came to a perfect understanding that there should be nothing used that Mr. Edison had a claim on.

Q56. You mean that there should be nothing used in the construction of the Latham apparatus?

A. I mean that the stop movement that Mr. Edison was using should not be used on our machine—on the Latham machine.

1889

Q57. What part did you understand that Mr. Woodville Latham had in the invention of the machine about which you have been testifying? Give your reasons for your answer.

A. As I understand, Mr. Woodville Latham gave direct orders, he also made sketches of experiments that were going on, at times when he couldn't come down himself to the shop he would send his son with instructions. We were employed by Mr. Woodville Latham to work for him. We received our pay from Mr. Latham. Those are the various reasons that I can give.

Recess.

1890

Q58. In the record of the interference, Latham vs. Armat, there is reproduced an exhibit which reads as follows:

"Boston Gear Works, 31 Hartford Street,
Boston, Mass., January 7, 1895. Sold to
E. W. Kleinert, 35 Frankfort, room 34, New
York, N. Y.

1 Tool Steel Intermittent 3 t $\frac{3}{8}$ face.

1 " " " 42 t "

made to order	\$15.75
Cr.	5.00

This includes time, experimenting and	10.75
perfecting to requirements. A dupli-	.25
cate order would cost much less. Ret.	<hr/>
money	11.00
Chg.25

1892

Rec'd Payment,

The Boston Gear Works,
by L. Burgess."

you recognize that as a copy of any bill made out to you? If so, what was it?

A. I do recognize the bill made out to me, 1 Tool Steel Intermittent 3 t, and the 1 Tool Steel Intermittent 42 t. I recognize this bill as being the one made out to me by the number of teeth that appear on this bill.

1893

Q59. What was the original of this bill? What is this a copy of?

A. This bill is an exact copy of the order I gave to the Boston Gear Works.

Q60. Have you recently read over a copy of the deposition which you gave in Latham vs. Armat interference?

A. I have. And I refreshed my memory on the date that appears in the same.

(Direct-examination closed.)

1894

Emil W. Kleinert.

Cross-examination by Mr. Ward:

XQ61. Mr. Kleinert, you stated, I believe, that you entered Mr. Latham's employ between the 23rd and the 25th of December, and that you found a machine for taking pictures with the movement with which they were trying to obtain a stop for the film; now, as a matter of fact, was there at the time you entered the shop an assembled machine with any stop mechanism in it?

A. There was.

1895 XQ62. What machine was this?

A. It was a machine with the frame that was made out of iron screwed together; the shaft and sprocket wheels were on that frame—in that frame of the machine. The movement with which they were trying to obtain the stop was on the machine at that time.

XQ63. What do you mean by the sprocket wheels; what sprocket wheels were you referring to?

A. I am referring to a large sprocket wheel that was worked in connection with this movement.

1896 XQ64. What was the purpose of this sprocket wheel?

A. The purpose of this sprocket wheel was to carry this film through a slide.

XQ65. Then you had a frame with a stop mechanism which drove a sprocket wheel to move a film intermittently, is that correct?

A. Yes, sir.

XQ66. Is that all there was to this machine?

A. There was more parts to this machine, such as small sprocket wheels and some gearing.

XQ67. And this stop mechanism operated all of these sprocket wheels?

A. I could not tell exactly whether it did operate all these sprocket wheels, for my entire effort was to get the proper stop with one large sprocket.

XQ68. Then all you are positive of is that there was a stop mechanism operating one sprocket wheel to move the film, and that the machine had other gearing which you do not recall the arrangement and operation of, is this correct?

A. I can recall the operation of these other gearing, as the same other gearing were used on the next frame that we made for the new sprocket wheel, or rather wider sprocket wheel.

XQ69. The only use to which this former frame and sprocket wheel was put was to test out the stop mechanism?

A. It could not have been because there were small sprocket wheels and gearings that must have been used in connection with this machine—that were there—and later on the only change that was made was in making sprocket wheels to accommodate the wider film, as well as the new stop movement.

XQ70. This stop mechanism you refer to, was that suggested by Mr. Dickson? Consisting of a reciprocating part?

A. I could not tell who it was that suggested it, for the reason that the stop movement was there and I was not in the employ of Mr. Latham previous to the time that I came here and did not know anything about it.

XQ71. This stop mechanism consisted of a reciprocating member moving back and forth in a slideway?

A. As near as I can remember it was.

XQ72. And is it your contention that the same frame in which this stop mechanism was assembled was the frame in which the Boston Gear was later assembled?

1900

A. Yes, sir.

XQ73. Was not this reciprocating stop mechanism quite different in construction and operation from the gear later on ordered from the Boston Gear Works?

A. It was quite different.

XQ74. How was it then that you could assemble both stop mechanisms in the same frame in connection with the same gearing?

1901 A. In ordering the Boston gearing I designed it to fit inside of the sprocket wheel which was the larger wheel, and it only required the making of one bearing to fit the driving gear in the frame of this machine.

XQ75. You worked, did you not, for about two weeks on this stop mechanism—I mean the reciprocating stop mechanism, after entering the shop?

1902 A. I did not work on the mechanism that was at the shop at the time I came. The experiments were made and the machine was shown to me; and as I understood, they could not go any further, because they did not obtain a perfect stop. I ordered this new gearing from the Boston Gear Works and in the meantime, before the arrival of this gear, I worked on the projecting machine, which took about two weeks' time.

XQ76. Did you not work on Dickson's stop device or experiment with it for a week or more after entering the shop?

A. I know of experimenting on this device of Dickson's for a few days. I might have experimented longer after ordering the gearing, which I do not remember.

XQ77. Did you find this stop device to be a failure?

A. I did.

XQ78. Did you believe at that time that the success or failure of this taking machine depended upon the determination of a successful stop movement?

A. Yes, sir.

XQ79. And at this time you found that Mr. Latham had been unable to determine upon a successful stop movement?

A. I could not tell that Mr. Latham was unable to determine upon a successful stop movement, but as I suggested this Boston gearing, which I have used before in various machinery, I knew it would obtain a better stop movement than of any that was suggested from someone else.

XQ80. You or Mr. Lauste suggested this stop movement to Mr. Latham, did you not?

A. We did.

XQ81. You testified that you were formerly working for Mr. Edison and that you gained knowledge of the stop movement which he was using in his camera or attempting to use. Were you not also aware at that time of the difficulties which Mr. Edison's people were encountering in developing a rapid stop movement for his camera?

A. I didn't know of any difficulties that Mr. Edison had in obtaining a rapid stop movement.

XQ82. Did you know whether or not they considered the stop movement, to which you refer, practicable or impracticable?

A. Oh, I didn't know anything of the kind.

XQ83. What was the nature of the stop movement which you said you had knowledge of?

A. It was on the principle of a double ratchet.

XQ84. Did one of the wheels have slots in it through which another wheel at right angles thereto passed?

1906

Emil W. Kleinert.

A. I could not remember.

XQ85. The Edison stop device to which you refer is not that shown in Edison's patent 589,168?

A. No, sir.

XQ86. As I understand your testimony, further work on the taking machine of Mr. Latham's was held up after experimenting with Dickson's stop device, at least the completion of the machine was delayed until they could discover a stop device which would be suitable for the rapid movement in such machines, is this correct?

1907

A. It was to some extent.

XQ87. Isn't it entirely correct? Did you not testify in answer to XQ75, that they could not go any further because they did not obtain a perfect stop?

A. They could not take a perfect photograph for the reason that they didn't have a stop movement which would stop the quivering of the film in taking a photograph.

XQ88. Dickson's stop mechanism also jammed when driven at high speed and caused entirely too much vibration for any practical result, did it not?

1908

A. It did.

XQ89. Did you ever see any drawings or sketches that Lauste made of this taking machine or any parts thereof while you were in the employ of Mr. Latham?

A. I did not.

XQ90. Did you ever see any sketch Mr. Latham made?

A. I have and I have been to see Mr. Latham at the Bartholdi Hotel, where he made sketches himself, to be taken to the factory.

XQ91. What was the nature of these sketches, of the complete machine or simply suggestions of detail parts?

A. Suggestions of detail parts of the reproducing machine.

XQ92. You are referring now to the projection machine, are you not?

A. Yes, projecting machine I should have said.

XQ93. Did you ever see any sketches of the taking machine which Mr. Latham made?

A. I do not remember.

XQ94. If you did not enter Mr. Latham's employ until the last of December, you cannot tell to what extent the design, organization and construction of the parts of the taking machine was left to Mr. Lauste, can you?

A. I could not, not being there.

XQ95. Mr. Latham, at the time you entered the shop, had great faith in Mr. Lauste's ability in designing and constructing such machinery, did he not?

A. I do not know of any of those affairs, how much faith he had in Mr. Lauste.

XQ96. Did you ever talk with Lauste about this taking machine which you and he were working on?

A. As far as working on and talking about the machine, we always have talked more or less about it, in trying to get it in proper working order.

XQ97. Did not Mr. Lauste give you to understand that this machine was his invention?

A. He did not.

XQ98. Did he ever tell you where the idea of forming the loop came from?

A. He did not.

XQ99. He never spoke to you one way or another in regard to the origin of the different features of the machine?

A. No, sir.

1910

1911

1912

XQ100. Then you have no personal knowledge as to whether Mr. Latham or Mr. Lauste is the inventor of the machine, other than that you have assumed Mr. Latham was the inventor because the machine was being built in his factory and that he was paying the wages and you and Lauste were obeying his commands? Is this correct?

A. We were given direct orders from Mr. Latham —Mr. Lauste and myself—and for that reason I have always believed him to be the inventor of that machine.

1913

XQ101. You were getting direct orders in regard to the Boston stop mechanism after you obtained it too, were you not?

A. There wasn't much orders to be taken after we knew where this stop movement had to go. There was a place already provided for this movement.

XQ102. And upon embodying this stop movement in the machine it was found to be satisfactory, was it? The Boston stop movement?

A. It was found to be not satisfactory.

XQ103. Well, upon embodying the stop movement obtained from Pearce, was the machine found to be satisfactory?

A. Yes, sir.

XQ104. Now, the stop movement ordered from Boston and that ordered from Pearce were identical in principle and in the shape of the broken gearing, except that in the Boston gearing the driven wheel was larger and the teeth were on the inside of the rim of the wheel, whereas in the gear ordered from Pearce the driven gear was smaller in diameter and had the teeth cut on the outside of the periphery, is this correct?

A. It is not correct.

1914

XQ105. Well, please state the difference between the two gears.

A. The driving gear of the Boston gear was smaller than the driven gear, whereas the gear ordered from Pearce were about the same diameter.

XQ106. Is that the only difference between them?

A. The difference between the Boston gearing and gearing from Pearce were that the Boston was an inside movement whereas the Pearce gearing was an outside movement.

XQ107. That is just what I stated, wasn't it? How do you remember so distinctly the day of the week and the date of the month on which you entered Mr. Latham's employ?

A. I remember distinctly the day of the week that I left Boston, the Sunday before Christmas, and the date by looking over the previous testimony.

XQ108. You read your previous testimony, then, before giving testimony in this case?

A. I had.

XQ109. Had you seen any of the exhibits in this case before giving your testimony, or the Latham patent in suit?

A. I had seen some of the exhibits.

XQ110. In the last two or three days? A. Yes, sir.

XQ111. Then your answer to Q35, wherein you are asked to describe from recollection, was really not given entirely from recollection, was it?

A. Yes, sir, it was, it was given entirely from recollection.

XQ112. The sketches which you saw and the patents which were shown you did not refresh your memory any?

1918

Emil W. Kleinert.

A. I recognize a few changes in the sketches I saw, also on the patent drawings.

1919

XQ113. When you were testifying in the interference, referred to in your direct examination, you stated that the machine shown you at that time—known as Latham's machine, Exhibit No. 12—was the original machine with which the picture of the incandescent lamp was taken and you stated there that you could identify it by the peculiar gearing embodied therein. As a matter of fact, were not two other machines identical with this one with which you took the picture of the lamp, made by Mr. Latham in the fall of 1895?

A. There was no other machine ever made identically the same as the machine that took the photograph of that swinging lamp, so the machine that I saw and testified to was the very machine I worked on, for reasons that I recognized my own work on that machine.

XQ114. Didn't you work on the other two machines?

A. I did not.

1920

XQ115. On the night of February 26th, when you took the picture of this incandescent lamp, were you using the wider film or the Edison film?

A. To my recollection we were using the wider film.

XQ116. Was the Griffo Barnet fight taken on the narrow or the wide film?

A. It was taken on the wide film.

XQ117. Now, at the time this picture of the Griffo Barnet fight was taken, had the extra sprockets been replaced by the smooth rubber rollers, to which you have referred?

A. There were never any smooth rolls replaced

with sprocket wheels. It was only the sprocket wheels taken out and the teeth or sprocket cut off.

XQ118. Didn't you say that rubber rollers were employed?

A. Yes, sir, rubber rollers were employed to hold the film against the sprocket wheels.

XQ119. Besides the sprocket wheel were the teeth cut off?

A. I believe they were.

XQ120. When were these rubber rollers first used?

A. I seen them there when I came to the factory, when I was first employed.

1922

XQ121. What would be the necessity of the extra sprockets with or without teeth if you had a rubber roller pressing on the other sprocket wheel?

A. The sprocket to which I referred to was below the one on which the rubber roller pressed.

XQ122. Was this machine which was referred to in that interference of which you testified as Latham's machine No. 12, built as a camera or as a projecting machine?

A. It was built as a camera.

XQ123. Was it ever used to your knowledge as a projecting machine?

A. Yes, sir.

XQ124. Did that original machine have the horizontal slideways on it, shown in the patent in suit?

A. No, sir, that machine had no horizontal slide-ways. That machine I referred to was used for projecting only as an experiment, which we tried out as an experiment in the shop.

XQ125. Was the machine enclosed in a box?

A. The machine was enclosed, but we rigged it up for the experiment of projecting.

XQ126. You took it out of its box, did you, and placed it before a lamp?

1923

1924

A. I do not exactly remember the experiment.
XQ127. Do you remember whether you succeeded in projecting pictures with it?

A. All that I remember was that the result was very unsatisfactory, and as we had a projecting machine at that time, didn't take up the matter any further.

XQ128. You had to disassemble and reassemble parts of this machine in changing it from a camera to a projecting machine, did you not?

1925 A. We did not make any changes whatever on that machine. We simply tried to project without making any changes.

XQ129. You never considered this machine as a projecting machine?

Mr. Page: Objected to as irrelevant and immaterial.

A. We did not.

XQ130. At this time you were constructing some continuously moving film machines for projection purposes, were you not?

1926 A. We had already constructed machines for projecting, and merely tried this out for an experiment. These projecting machines were the continuous film machines.

XQ131. You built this original machine No. 12 for taking pictures to be used in your projecting machines, which were of the continuous feed type, and you regarded this machine, No. 12, as useful only in the taking of pictures, did you not?

Mr. Page: Objected to as a double question, both parts of which are immaterial.

A. I never regarded this machine as useless as a projecting machine.

XQ132. It was only intended to be used as a camera, was it not?

Mr. Page: Objected to as irrelevant and immaterial.

A. I know that we have only used it as a camera.

XQ133. Did Mr. Dickson, upon his visits to the factory, and by his manner during said visits, give you the impression that he was making those visits against his desire and at the insistence of Mr. Latham without personal interest in the outcome of the machine under construction, or did he give you the impression of being very much interested in the outcome of the work and being anxious to promote it in any way he could?

1928

Mr. Page: Objected to as irrelevant and immaterial.

A. He gave the impression or made the impression on me that he came there to help out Mr. Lauste, who was a discharged employee of the Thomas Edison and unable to obtain work anywhere.

1929

XQ134. What makes you say that Mr. Lauste was discharged from Mr. Edison's employ?

A. He was discharged from the laboratory and went to work with the Edison Phonograph Works and was unable to hold his job.

XQ135. How do you know?

A. I was working there at that time.

XQ136. In the laboratory with Mr. Lauste?

A. At the phonograph works.

1930

XQ137. Were you working with Mr. Lauste in the same department?

A. I was working with Mr. Lauste in the same room.

XQ138. Did you know that Mr. Dickson had recommended Mr. Lauste to Mr. Latham, as just the man he needed to build this machine?

A. I did not know anything about it.

XQ139. Was Lauste under Dickson in Mr. Edison's laboratory?

1931

A. No, I don't believe he was as far as my knowledge goes.

XQ140. Were you working under Mr. Dickson?

A. I did not.

XQ141. Why do you say that Mr. Lauste was unable to get work?

A. I know that he had been out of work several months.

XQ142. Do you know that he was not sick during this time?

A. No, I could not answer that.

1932

XQ143. I hand you complainant's exhibit, Lauste's sketch, do you consider that a fair sketch for a mechanic to make while sick and propped up in bed?

A. It is a hard thing for some mechanics to make free hand sketches, although I consider it a fair sketch for a man under those conditions.

XQ144. Would you say that a man who made that sketch while propped up in bed was incompetent of sketching out an assembled view of Machine No. 12, a part of which this machine represents?

A. I could not answer that question, it depends on the man.

XQ145. As a mechanic, in observing the straight lines of the shafting in that sketch, the accuracy with which the sprocket teeth are spaced, the representation of the bevel gearing, and the relative proportion of the parts, would you not say that the sketch, made under the circumstances which are related, is indicative of a considerable turn for mechanical drafting on the part of the person who made it?

Mr. Page: Objected to as purely argumentative and as calling for an inconclusive deduction based on hypothesis.

1934

A. I can give no answer to that.

XQ146. Are you familiar with mechanical drawings, and illustrated sketches as this?

A. I am familiar with drawings, but very little with illustrated sketches as this.

XQ147. As a mechanic and one who has seen the machine which this sketch purports to represent, do you not consider the sketch a very clear and accurate representation of that machine, considering the circumstances under which it was made?

1935

A. I consider it a fairly good sketch.

Cross-examination closed.

Deposition closed.

Signature Waived.

1936

Frederick A. Anthony.

New York, July 6, 1911.

Met pursuant to notice.

Present—PARKER W. PAGE, Esq., Counsel for
Complainant.SAMUEL M. WARD, Esq., Counsel for De-
fendant.1937 FREDERICK A. ANTHONY, a witness called
on behalf of the complainant, having been first
duly sworn, testifies in answer to interrogatories
by complainant's counsel as follows:Q1. Please state your name, age, residence and
occupation?A. Frederick A. Anthony, age 56 years; resi-
dence, Hackensack, N. J., occupation, broker.Q2. Mr. Anthony, were you ever connected with
a concern known as E. & H. T. Anthony & Com-
pany, a corporation doing business in this State?

A. Yes, I was.

Q3. Will you state briefly the period of your
connection with that company?1938 A. I became connected with E. & H. T. Anthony
& Company in December, 1888. I was secretary
and a director in the company at that time; in
1896, I became secretary and treasurer, and re-
mained an officer and director in E. & H. T.
Anthony & Company until the present time.Q4. Did the E. & H. T. Anthony & Company un-
dergo any reorganization or was it known subse-
quently by other names?A. In the fall of 1901 a new company was organ-
ized known as the Anthony & Scovill Company. I
was the first Vice-President and Treasurer and a
Director of that company. It took over all the

assets and business of E. & H. T. Anthony & Company and the Scovill & Adams Company and the Monarch Paper Company. E. & H. T. Anthony & Company still however retained its legal existence.

Q5. Up to what time did you continue as an officer of the Anthony & Scovill Company?

A. I resigned in February, 1906.

Q6. After that date did you continue as a stockholder in the Company and were you familiar with its operations and conditions?

A. Yes, I remained a stockholder in the Company and attended the annual meetings; also saw the various officers of the Company from time to time and had conversations with them in regard to the Company and its condition.

1940

Q7. While you were an officer of the E. & H. T. Anthony & Company did that company become interested in any invention or inventions of Woodville Latham pertaining to moving picture apparatus?

A. Yes.

Q8. Will you state generally what that interest was and how far the Company went in promoting such inventions?

1941

A. I think it was in 1896 or 1897, that I first became acquainted with Mr. Woodville Latham and some time after we made a contract with him to assist him in getting his patent applications through the office, and we paid the expenses of the Interference suit with Castler & Armat. Mr. Latham assigned the patent that was in interference to us, and we were to pay him a royalty or give him some interest in the proceeds of the patent if we did anything with it, the exact details of that agreement I have forgotten.

1942

Frederick A. Anthony.

Q9. Up to the time when the patent which is involved in this suit, namely, No. 707,934, issued to the E. & H. T. Anthony & Company, what amount of money had your company expended in connection with this invention?

1943

A. Before this patent was issued we had manufactured a machine that was called the Anthony Biopicon. We exhibited them at our show room 591 Broadway, New York City, and also sent one abroad. We also arranged for an exhibition of these moving pictures made by using this apparatus in an advertising scheme. We rented a place on Broadway about 29th or 30th Streets, threw the pictures on a screen that was visible to the public, showing the advertisements between the different pictures. We spent a further sum in having pictures made for exhibition purposes and these expenses amounted in all to something like \$11,000. We carried the patents on our books at a value of \$10,000.

1944

Q10. After the patent was granted your Company in 1902, did you bring any suits for infringement under the patent, or take any other steps to enforce the Company's rights under it?

A. We did not bring any suit, but we notified the Mutoscope Company and the Edison Company that they were infringing, subsequently we met representatives of these companies and endeavored to arrange a combination of the different interests. I also called on Mr. Edison at Orange, talked with him about the patent, but he told me that he did not think there was a very great future for the moving picture business and none of us did at that time, and we failed to make any combination.

Q11. Why did your Company not bring suits for infringement of this Latham patent against

users of apparatus embodying the invention covered by its claims?

A. In July, 1901, I and others made an agreement with the Goodwin Film & Camera Company under which we took the control of that company and agreed to manufacture film under the Goodwin patent, put it on the market and also to prosecute infringers of the patent as we might be advised by counsel. This film business was quite an important branch in the photographic trade and we were very anxious to get the film on the market. It was a business that was already developed and the returns from it promised to be much greater than anything in the moving picture line at that time. We therefore undertook to make films and we were not very successful in our efforts, so we conducted negotiations with Mr. Lefferts, President of the Celluloid Company, to make a film under the Goodwin patent for us. These negotiations lasted for some two or three months when we became convinced we could not make a satisfactory agreement and it would be necessary for us to manufacture the film ourselves. The factory that had been built by Goodwin in Newark was a very small affair and not large enough to carry on an extensive business. We could have started the business there but thought it would be more economical to build a larger plant and the Goodwin Company, of which I was President, started building a factory in Binghamton, New York, in the fall of 1901. The factory was completed in the spring of 1902, all during the year 1902 we were busily engaged in designing a machine for making films and learning how to make the support itself. We did not get into a position to put the film on the market until December of that

1946

1947

1948

Frederick A. Anthony.

1949

year. We had also taken over other factories in the fall of 1901 when the new company was organized, and were busy perfecting the products of those factories during this year as well. When we were able to furnish the cartridge form of film to the public in December, 1902, we filed a suit against the Eastman Company for infringement under the Goodwin patent. Early in 1903 they brought a suit against us under the Turner patent. These two litigations were prosecuted and the Turner litigation was pressed especially so that our attorneys were wholly occupied with our affairs in these cases and could not very well undertake new litigation under other patents.

Q12. What was the financial condition of the E. & H. T. Anthony Company and its successors in business, the Anthony & Scovill Company and the Ansco Company, during the years 1902 to and including 1908?

1950

A. The E. & H. T. Anthony Company were in good financial condition, but after the formation of the Anthony & Scovill Company in 1901, we were obliged to borrow very heavily from the banks, as it required a good deal of money to build the new factories and install the new machinery, advertise and put the new products on the market, so that we did not feel, in view of this condition and the fact that we were already engaged in expensive litigation, that we could afford to take up new litigation, and in 1903, about June of that year, I think, one of the banks where we were in the habit of borrowing refused to discount our paper and we were obliged to notify the other banks that held our paper that we would have to have an extension. This was granted, and a committee of

three bankers was appointed to supervise our company; they employed a firm of accountants to attend to the details. The extension was only a temporary relief, because in a short time we had to begin paying \$5,000 a month on our extended notes, and after three months I notified the banks that we were making too much of a draft on our working capital and could not continue. Another meeting was held and the accountants advised that financial assistance be extended to us. Some of the banks, however, were not willing to do so, and the notes which they held were taken over by the others that were willing to extend the assistance at a heavy discount. Money was then advanced us from time to time, secured by our accounts receivable. All our transactions were checked by the accountants and we were not allowed to issue a check or a note that was not countersigned by them. The committee of bankers insisted on expenses being reduced to a minimum and were anxious to have the litigations already under way stopped, and had it not been for the fact that if we abandoned the Turner litigation we would have been unable to furnish films for our cameras, and that if we abandoned the Goodwin litigation that contract would have been canceled, they would have refused to allow us to go on. I saw Mr. Eastman and endeavored to arrange some compromise, but was not successful, so the litigations continued. This condition of affairs existed all through 1903, 1904 and 1905, and in the latter part of 1905 we did not have sufficient accounts receivable to cover the loans that were made, and there was more or less talk and consultations in regard to reorganizing the company. In

1952

1953

1954

Frederick A. Anthony.

1955

December, 1905, I advised the bankers that I was not willing to remain with the company if they were going to attempt to run it as it was then being run, and I resigned in February, 1906. At the annual meeting in 1907 which I attended the statement furnished the stockholders showing that the company was not in any better condition than it had been, and in the summer of 1907 the Secretary, Mr. Lamoutte, called at my office in New York and wanted to know if I could not arrange to raise some money to take over the concern, as he thought unless something of the kind was done it would go to pieces. I told him I thought I could do so, but I did not wish to make a proposition, but that he could sound the people who controlled the company and find out if they would be willing to consider anything of the kind. He advised me that they were not disposed to do so, and the company was reorganized in the fall of 1907, and thereafter became known as the AnSCO Company. At the annual meeting of the AnSCO Company, held in March, 1908, a statement was submitted to the stockholders showing that the company had a very small amount of cash on hand, something less than a thousand dollars, so that during all these years none of the companies that had the Latham patent were in a position to maintain their rights under it.

1956

Q13. You have stated that you approached other parties with a plan for forming some combination under the Latham patents. Was this for the purpose of exploiting the patents under some joint arrangement by which you could realize something from them?

A. We thought if we could put them into the hands of people who were not so occupied as we

were that they could be made a source of profit to our company.

Q14. Were these efforts made during the period to which you have referred, namely, from 1902 to 1906 or 7?

A. No, it was in 1902, shortly after the patent was issued that we took it up actively, then after that time we were too busy with the other matters I have referred to.

Q15. Could your company from any resources at its command or under its control, have borne the expense of litigation under the Latham patent at any time subsequent to the date when the banks stopped your credit?

A. No.

Q16. The E. & H. T. Anthony & Company and its successors, the Anthony & Scovill Company and the AnSCO Company up to the time of the annual meeting of 1908 to which you have referred were, so far as you are informed, in practically a state of bankruptcy, were they not?

A. The E. & H. T. Anthony Company was not, but the Anthony & Scovill Company were, the AnSCO Company were not bankrupt but had no resources.

1958

Q17. When you say the E. & H. T. Anthony & Company were not financially embarrassed, do you refer to the period before or after its business and assets had been turned over to the Anthony & Scovill Company?

A. Before.

Q18. And what was the date of the organization of the Anthony & Scovill Company when it took over the business of the E. & H. T. Anthony & Company?

1959

1960

Frederick A. Anthony.

A. They assumed at that time the obligations that I and others had incurred under the Goodwin contract. That was in November, I think, of 1901.

Recess.

IT IS AGREED by counsel that the signature to the deposition of E. W. Kleinert heretofore taken in this cause may be waived.

Cross-examination by Mr. Ward:

1961

XQ19. In answer to Q8 you state that we paid the expenses of the interference referring to the Castler vs. Armat Latham Interference. Will you please state what company you are there referring to?

A. I believe it began while we were running under the name of E. & H. T. Anthony & Co. Probably some of those expenses were paid later by the Anthony & Scovill Company.

XQ20. Who finally took over all of Mr. Latham's interest in the patent, the E. & H. T. Anthony Company or the Anthony Scovill Company?

1962

A. The E. & H. T. Anthony Company took the title for the application from Mr. Latham.

XQ21. Is it a fact that this company received Mr. Latham's share of the application of the patent in suit in payment of certain notes amounting to about \$250 that this company held of Mr. Latham's?

A. I think that referred to the smooth roller patent, and that was the Anthony & Scovill Company.

XQ22. What do you mean by the smooth roller patent?

A. There were two patents, the one referred to in this suit was the one that controlled the loop

idea and was used with a perforated film, the smooth roller did not use the perforated film.

XQ23. Are you positive that the transaction mentioned in my XQ21 did not relate to the patent in suit?

A. My recollection is that we made an agreement with Latham about that patent before it was issued. We did advance him some money, but I think it was more than \$250.

XQ24. If I should tell you that Mr. Latham has stated that the transaction referred to patent in suit, would it change your opinion in regard to this matter any?

A. I should think my recollection was as good as his.

XQ25. Did Mr. Latham ever receive anything from either of your companies as the result of the agreement which you have mentioned and under which you believed you took title to the patent?

A. Yes, we advanced him money at the time we made that arrangement.

XQ26. About how much?

A. My impression is that it was \$500 or \$1,000.

XQ27. Did he ever get anything after this at all?

A. Not in connection with that patent.

XQ28. You stated in answer to Q10 that you notified the Mutoscope and the Edison Companies that they were infringing this patent in suit. Do you recall when and how this notice was given?

A. It was a short time after the patent was issued and in writing.

Mr. Ward: In view of the witness's answer the answer to Q10 is now objected to as secondary evidence. This objection being

1966

Frederick A. Anthony.

timely under agreement between counsel, counsel for defendant not being present at the direct examination.

XQ29. What was the answer from these companies to your threats of infringement?

1967

A. The representatives of these companies met by an arrangement made through Mr. Phillips Abbot, who was our patent solicitor and we had several conferences with them at our office in New York. The suggestion was made at the time we notified them that arrangements might be made to pool the interests and as a result of that the conferences were held.

XQ30. That is, these threats contained also a suggestion that the interests might be pooled?

A. Yes.

XQ31. At this interview were you not unable to persuade the representatives of these companies that there was sufficient danger from this patent to warrant pooling on their part or ceasing infringing?

1968

Mr. Page: Objected to as irrelevant and immaterial and as calling for a conclusion rather than a fact.

A. There were several interviews and the Mutoscope people were very much in favor of pooling the interests but Edison did not wish it, and I believe that at that time there was rather an unfriendly feeling between the Edison people and the Mutoscope people which made it difficult to bring them into an arrangement that would have them working together.

XQ32. And these were the only threats you made against infringers of the patent in suit?

A. After that time I saw Mr. Edison personally and talked with him about patents. He told me that he did not believe in pooling the interests, that he did not think there was a very great future for the moving picture business. There was another party, I think, in Chicago, I have forgotten his name, who was infringing and I am under the impression that he wrote him.

XQ33. Did you know that Mr. Thomas Armat and Mr. C. Francis Jenkins were using a loop at this time?

1970

Counsel for complainant asks at what time.

Mr. Ward: I refer to the time at which you threatened the Edison and Mutoscope Companies.

Mr. Page: Question objected to as inferring a state of fact which is not shown existed and which is confidently believed from somewhat complete knowledge on the subject not to have existed. The Latham patent was granted in 1902, and the only evidence in this case with respect to the use by Thomas Armat refers to the years 1895, or possibly 1896.

1971

Mr. Ward: Counsel for complainant replies that this is cross-examination, and does not believe that every fact cross-examined on has to be proved in this record.

A. I remember hearing that Armat had formed a corporation to manufacture these moving picture machines and I recall that there was a Mr. Jen-

1972

Frederick A. Anthony.

kins who had something to do with the business at one time, but I do not recall that they ever amounted to anything or that they marketed their machines commercially.

XQ34. Is the party in Chicago to whom you referred Mr. George Klein?

A. I have forgotten his name.

XQ35. How long had the Anthony & Scovill Company taken over title to this patent in suit before it became interested in the Goodwin patent to which you have referred?

1973

A. It was at the same time.

XQ36. You took title to both patents at the same time?

A. Yes.

XQ37. And you commenced suit on the Goodwin patent about how long after this?

A. Just about a year.

XQ38. Why was it that you commenced suit on the Goodwin patent and not on the patent in suit, having previous to this time called attention of the Edison Company and Mutoscope Company to their infringement?

1974

A. The Godwin contract obliged us to begin suit against infringers and the film business was developed with a large demand for films and it was an article on which there was a large profit made. The moving picture business was not an important item to us, it had not been developed to its present proportions and was not at all vital to our business, whereas the films were because we could not get any films to supply our cameras unless we made them ourselves and it was more important to us to get the control of the manufacture of films than the control of the moving picture business.

XQ39. In other words, you regarded the machine

of the patent in suit as a rather unimportant component of your business at that time?

A. Yes. It was not at all necessary that we have a moving picture machine but it was very necessary that we should have a film to supply the dealers who bought their goods of us because the Eastman Company would not supply dealers with their films if they bought our cameras.

XQ40. The attention and energy of your company was concentrated on the Goodwin patent matters?

A. No, at the time that we formed the Anthony & Scovill Company we took over the business of the Columbia Paper Company which was a large concern manufacturing photographic papers located at Westfield, Massachusetts. That company manufactured raw paper from the rag, afterwards sensitized it, and cut it up for sale. They manufactured a gaslight paper known as Cyko, a platinum paper, backing paper and a cheap collodion paper and the necessary chemicals to use with them, so that we had that business to develop as well as the film business and we had built a factory in Binghamton the previous year for manufacturing collodion paper; all these articles were very necessary in our business so that we could supply a dealer with anything he wanted and make him independent of the Eastman Company.

1976

XQ41. If your patent had been regarded by your company and the trade at that time as of considerable value, do you not believe that you could have arranged to bring suit against some of those infringers?

1977

Mr. Page: Objected to as calling for a mere conclusion and not a fact.

Mr. Ward: Counsel for defendant is ask-

1978

Frederick A. Anthony.

ing this witness for his belief as to what he would have done under certain facts, he having previously testified as to his opinion on different facts.

1979

Mr. Page: Counsel for complainant submits that this does not obviate the objection. It is quite competent for the counsel to elicit facts and to argue from those facts or ask the Court to draw conclusions based upon them. It is not only irrelevant and immaterial what the witness's beliefs in the case may be but it is not competent to inquire into them in the absence of full knowledge of the facts on which they are based.

Mr. Ward: If counsel for complainant believes the question not to be proper, and seeks to save time he can instruct the witness not to answer the same, and let the Court decide the propriety of the question, rather than argue on the record. Counsel for the defendant believes he is in the proper bounds of cross-examination.

1980

A. We regarded the patent as of considerable value and would have brought suit under it but for that fact that we had two litigations under way and that our energies were directed so largely to bringing our new combinations into working order. We made no attempt to get any outside parties to bring suit as we had never asked any outside help of this kind.

XQ42. Did you try and interest outside capital in the Goodwin suits?

A. No.

XQ43. Neither the Anthony & Scovill Company nor the Ansco Company between the issuance of

the patent in 1902, and the date at which you severed your connection with the Company, 1906, attempted to interest outside capital in the patent in suit with a view of suing infringers?

A. No, the only thing we attempted to do was to make a combination with the Mutoscope and the Edison people, we proposed to them that a company should be formed to take over the title of the patents belonging to these different parties and that that company should undertake their defence and manufacture the machines as we were not able to give the time to this ourselves.

1982

XQ44. In what year was this proposed pool that you speak of?

A. It was in 1902, a short time after the patent was issued.

XQ45. Do you know whether or not the Ansco Company between 1906, the date at which you severed your connection with the company and the date of the stockholders' meeting of 1908 to which you have referred, made any attempt to interest outside capital with an intention of bringing a suit on the patent in suit?

A. The Ansco Company had not been formed when I left; it was not formed until October, 1907. The Anthony & Scovill Company from the middle of 1903 until the Ansco Company was formed was under the control of the committee of bankers who held the obligations of the company. They would not allow any further litigation to be commenced nor would they bring in outside parties. They were assisting the company as they thought that it could get upon its feet again and when they found that it would be more desirable to reorganize, the new company was formed in 1907, and at the first meeting held in 1908, the new company did not

1983

1984

Frederick A. Anthony.

have very much cash and neither company was in a position to spend any money themselves on any litigation which could be avoided nor were they in a position that would induce outside people to put any money in their venture, so it was unnecessary to attempt to do something that would not be very likely to be successful. I might add that they did not make any effort to get any capital to conduct any litigation.

1985

Mr. Ward: All but the last sentence objected to as irresponsible.

XQ46. Do you know how long after you notified the Edison and Mutoscope Companies and the Chicago party that you spoke of, they continued to manufacture moving picture apparatus infringement of the patent in suit?

A. I think they kept right along until they were brought together by that combination called the Motion Picture Patents Company.

XQ47. Do you know what year it was?

A. I think it was last year that I heard of the formation of the company.

Cross-examination closed.

Deposition closed.

Adjourned to Friday, July 7, 1911, 11 a. m.

Signature waived.

New York, July 20, 1911, 11 a. m.

Met pursuant to adjournment.

Present—Counsel as before.

THOMAS W. STEPHENS, a witness called on behalf of complainant, having been first duly sworn, deposes as follows:

Q1. Please state your name, age, residence and occupation?

A. Thomas W. Stephens, 44 years of age, banker, Montclair, New Jersey.

Q2. Are you connected in any way with the Anseco Company, and if so, how long have you held any official position in that Company?

A. I have been the President of the Anseco Company since its formation October 1, 1907.

Q3. Prior to that time, were you connected in any way with the Anthony & Scovill Company, predecessors of the Anseco Company?

A. I was President of the Anthony & Scovill Company.

Q4. Have you read the deposition of Frederick A. Anthony, a witness for complainant in this cause?

A. I have but very hurriedly.

Q5. Mr. Anthony states that he severed his connection with the Anthony & Scovill Company in February, 1906. Will you please state what was the financial condition of the Anthony & Scovill Company and its successor, the Anseco Company, from that date up to February, 1908, and the ability of these companies to carry on suits for infringement against infringers of the Latham patent, 707,934, which is in suit in this case and which, as appears, was at that period owned by the companies named?

1990

Thomas W. Stephens.

By Mr. Eyre:

Objected to as calling for a conclusion and opinion and as not the best evidence.

A. The financial condition of these companies at the time you indicate, was, to say the least, chaotic, and being closely in touch with the financial side of the business I can say without fear of contradiction that they had no money for the purpose named.

1991

Q6. How long was it after February, 1906, when Mr. Anthony resigned as an officer of the Anthony & Scovill Company that the financial condition described by him in his testimony existed as a bar to the prosecution of such suits for infringement?

By Mr. Eyre:

Objected to as improper, it not appearing that this witness has sufficiently examined Anthony's testimony to know just what Anthony testified on this subject or that he would agree with Mr. Anthony's statements. This witness should state the facts himself.

1992

A. That condition was in existence at the time this patent was disposed of and to my great regret, continued to exist for more than a year after. As I stated, in answering a previous question, I have paid close attention to the financial side of both of these companies since becoming President and as a lender of money to both companies, know full well what their financial condition was.

Q7. Do you know whether these companies, through you as an officer, or others ever made any efforts to dispose of the Latham patent in question

prior to its purchase by the Mutoscope Company, and if so, will you state what such efforts were?

By Mr. Eyre:

Objected to as secondary except in so far as it calls for the witness's own efforts.

A. Negotiations for the sale of this patent were conducted on behalf of these companies entirely by myself and in addition to the negotiations with the American Mutoscope & Biograph Company I negotiated on several occasions with Mr. Frank L. Dyer, representing the Edison Company. In fact, thought it much more likely that this patent would be sold to Mr. Dyer rather than to the American Mutoscope & Biograph Company. I might go further and say that the sale of this patent was a part of my plan to improve the financial condition of my companies.

1994

Q8. Were you aware that the application for this Latham patent, while pending in the Patent Office, was involved in an Interference?

A. I was, but, of course, not until after it was all over.

1995

Q9. Did you at any time make any efforts to find any of the exhibits which were used and filed on behalf of Latham in that Interference and if so, will you state what steps you took and what facts you ascertained with regard to these exhibits?

A. I caused repeated efforts to be made to find these exhibits, and after a most thorough investigation, learned that in cleaning up the storage department of one of our plants in Binghamton, the mechanical exhibits to which you refer, were inadvertently burned with a lot of junk, the accumu-

1996

Thomas W. Stephens.

lation of a number of years. There were certain paper exhibits which I was able to find in the files of the company which were turned over to counsel for complainant. I may state that I have been advised by at least two of my associate officers, that they distinctly remember seeing these exhibits on numerous occasions when passing through the department in which they were stored but that as they had been there so long, they were considered of no value.

1997

By Mr. Eyre:

The last portion of the answer is objected to as hearsay.

Direct-examination closed.

Cross-examination by Mr. Eyre:

XQ10. During the entire period you have referred to, your company was carrying on a patent suit brought by it for infringement of the Goodwin patent for photographic film, was it not?

1998

A. I think the Goodwin suit was begun in 1902, but I am not prepared to say that during all the period from the time of the issue of the Latham patent up to the time of its sale, we were engaged in prosecuting the Goodwin suit.

XQ11. Well, this Goodwin suit was being prosecuted at the expense of your company from 1902 on to the present day?

A. Yes, for the reason that the Goodwin patent covers an article absolutely necessary and germane to our business, as without the sale of films the line would be incomplete and it would be next to impossible to conduct the business.

XQ12. Isn't it fair to say that when you testified that you could say, without fear of contradiction, that at no time did your company have money to spend upon a suit in the Latham patent, you in substance meant that considering the financial condition of the company and taking everything else into consideration, it would have been bad business judgment to divert any of the money the company had from other things to the conducting of such a suit?

A. I should not regard it in that light, for the reason that the company had no money whatever for the prosecution of these litigations except as it could borrow it, and as a large lender to the company I was unwilling to do anything more than to prosecute the Goodwin litigation upon which so much had already been spent and upon which so much depended.

XQ13. When did you make the search, or rather have it made, for the exhibits in the Latham Interference?

A. We began to search for everything we had bearing upon the Latham patents at the time I personally took up negotiations for the sale of the Latham patent which must have been at least a year to eighteen months prior to the date of sale.

XQ14. When did you succeed in finding the paper exhibits?

A. During the progress of the search, the actual time as nearly as I can locate it from memory being from 2 to 2½ years ago, we found, as I recollect, from advices from my associate officers at Binghamton, stored away in some old boxes of papers, a number of foreign patents covering the Latham invention and correspondence relating

2002

Thomas W. Stephens.

thereto, also the exhibits which were turned over to counsel, as before stated.

XQ15. When did you turn over these Interference exhibits to counsel?

A. I should say within the last six months.

XQ16. How did you turn them over by letter or personally?

A. I think on cleaning up my desk on one occasion, I found a lot of old papers which meant but little to me, bearing on the Latham patent, having disposed of it, and was about to throw them away but concluded before doing so to call up Mr. Kennedy, President of the Biograph Company, which I did, remembering that at the time his company had acquired this patent I had promised to give to him anything I might have bearing upon it. He asked me to turn these papers over to the company's patent counsel, and if I remember correctly, suggested that I send them to Mr. Page or that he would have Mr. Page call for them. In any event, Mr. Page did call within a few days, at which time I think I gave him such papers bearing upon the case as he wanted.

2003 XQ17. Did you give him all the old Interference exhibits that you had found?

A. Yes.

XQ18. Prior to your calling up Mr. Kennedy you had not been asked by anyone connected with the present complainant or his counsel for any of the Latham Interference Exhibits or to make a search therefor had you?

A. I don't think so. I had gone over these papers in a casual way as one does with papers which accumulate, but as they meant little or nothing to me and our companies had parted with the

patents, I considered them of no value and expected they would some day find their way into the waste basket.

XQ19. If I understand you correctly, somewhere about 2 to 2½ years ago, you searched for these exhibits and found the paper exhibits. Why didn't you turn them over with the sale of the patent?

A. At the time of the sale of the patent I remember saying to Mr. Kennedy that in view of the vicissitudes of the Anthony & Scoville Company and the fact that its general offices and business had been removed from No. 122 Fifth Avenue to Binghamton, necessitating the shipping of from 10 to 15 carloads of merchandise and equipment to say nothing of books of account and papers running back over a long period of years, it was quite likely that stored away somewhere in all this accumulation there might be papers bearing upon the Latham patent and that I would endeavor from time to time as we might run across them, to gather them together for him, if they were ever needed. Instructions were then given to my associates at Binghamton to be on the lookout for such papers, from which time, whenever anything bearing upon the case came to the surface, it was sent to me, hence the accumulation of these papers on my desk. Occasionally when I would meet Mr. Kennedy I would remark that I was picking up odds and ends of papers bearing upon the Latham case and that they were accumulating on my desk. Doubtless it was the recollection of these conversations which prompted me to telephone him as I did, as about once in every so often I have a fit of cleaning up my desk, being a crank on that subject.

XQ20. But I understood that you found these

2008

Thomas W. Stephens.

paper exhibits some years ago but did not call up Kennedy until within the last six months. Have I misunderstood your testimony, or, if not, why didn't you turn them over when you found them?

A. You apparently have not misunderstood my testimony as it seems to be perfectly clear, that when these papers came to me, I did not recognize them as exhibits. In fact, I do not know if I should know an exhibit if I saw it. In my previous statement, when referring to having caused to be made searches, I meant searches for anything having to do with the Latham matter but the exhibits or papers used in the Latham Interference were not specifically in my mind.

XQ21. Have you any means of ascertaining whether it was before or after April 6 of this year that you advised Mr. Page that you had these Interference exhibits?

A. I have not at the moment, but if there was correspondence between Mr. Page and myself that should show the dates.

XQ22. When were the mechanical exhibits burned?

2010 A. This clean up of stuff supposed to be of no value must have occurred shortly after the removal to Binghamton five or six years ago.

XQ22. So far as the legal title record of the patent in suit is concerned, it would seem that the application passed to the E. & H. T. Anthony & Company before the patent issued which was August 26, 1902, and that it did not pass to the Anthony & Scovill Company until February 5, 1908, the same day that the latter Company transferred the patent to American Mutoscope & Biograph Company. I understand, however, from the testimony that the Anthony & Scovill Company took over

the E. & H. T. Anthony & Company in 1901. Am I right in understanding that you have considered the matter as if the Anthony & Scovill Company had owned the patent or invention from the time it took over the E. & H. T. Anthony business?

A. Anthony & Scovill Company in 1901, became the owner of the stock of the E. & H. T. Anthony Company.

XQ23. So that the Anthony & Scovill Company had full control and indirectly entire ownership of the Latham patent during its entire life up to February 5, 1908? 2012

A. Yes.

Cross-examination closed.

Deposition closed.

Signature waived.

Recess.

PARKER W. PAGE, a witness on behalf of the complainant, having been first duly sworn, deposes as follows:

I am of mature age. I am a member of the firm of Kerr, Page, Cooper & Hayward, counsel for the complainant in this cause and I have had personal charge of the conduct of this case since its inception.

In view of certain of the proceedings in this case and statements made by me as counsel for com-

2014

Parker W. Page.

plainant on the record, I make the following statement:

2015

In the early spring of the present year, when the defendant had put in its testimony with regard to prior patents and publications, I took steps to secure proofs of the dates when the invention of the patent in suit had been made by Mr. Latham. For this purpose I went through the files of the internee Latham vs. Casler vs. Armat in the United States Patent Office and also employed a Mr. Hutchinson of Washington to examine the files of the appeal of this interference in the Court of Appeals of the District of Columbia. I found nothing in the Patent Office files except testimony, stipulations, orders, &c., and Mr. Hutchinson reported to me that the records of the Court of Appeals showed that all of the exhibits which had been offered on behalf of Latham in the interference had been withdrawn after the decision of the case by Mr. Henry A. Seymour of Washington, D. C. I wrote to Mr. Seymour inquiring about this and was informed by him that he had shipped the exhibits in question to Mr. Phillips Abbott of

2016

New York. I had a conference with Mr. Abbott over the telephone about the matter and he asked me to write to him a definite statement as to what was wanted and on April 8, 1911, in compliance with this request, I wrote to Mr. Abbott, asking him to institute a search for the missing exhibits. This appears in a letter of April 8, 1911, which I find on page 417 of one of the letter books of my firm.

Mr. Abbott informed me by letter that he did not recall the incidents but sent me a copy of a letter from his files from which it appeared that the exhibits had been turned over to the Anthony & Scovill Company. I thereupon secured from Mr. H.

N. Marvin a letter of introduction to Mr. Thomas W. Stephens of No. 2 Wall Street, New York City, who was connected with the Anthony & Scovill Company and called on that gentleman and asked him to have a search made for these exhibits. Mr. Stephens asked me to send him a statement of exactly what was wanted and this I did as appears from a copy of a letter signed by me on April 20, 1911, which I find on page 550 of the same firm letter book above referred to.

In the meantime, I had been carrying on investigations through different parties in an endeavor to find some trace of Woodville Latham and his sons, Otway and Gray Latham. I think as early as the fall of 1910, I had employed a Mr. Raphael Netter of New York who was acquainted with Latham and had done some work for him to look him up, and after some weeks or months, Netter reported to me that Latham and his two sons, Otway and Gray, were all dead. As he could secure no legal proof of this fact, I employed on the recommendation of Mr. Marvin, a Mr. Edmond Congar Brown of New York City, who had formerly, as I understood it, acted as attorney or counsel for Mr. Latham. I requested Mr. Brown to ascertain all that he could about the Lathams and if he found that they were dead, to secure the proper evidence of that fact. Sometime after that, I think, in March or the early part of April, Mr. Brown reported to me that Woodville Latham was dead; that both of his sons, Otway and Gray Latham, were also dead but that he had a son employed in a drug house in New York and a sister whose address he gave me, living in Washington. I found upon personal inquiry that the son supposed to be in the drug business, was also dead, and about the 20th of April, I sent Mr. S. S. Dun-

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Parker W. Page.

ham of this office to Washington to look up Mr. Latham's sister and to make arrangements to take her testimony with regard to the death of her brother and his two sons, Otway and Gray. Mr. Dunham returned to New York on April 22nd and reported having seen Mr. Latham's sister and having ascertained from her that her brother Woodville Latham was alive and in New York. I immediately went up to 116th Street where I found Mr. Latham living in a little room about 6 feet by 8, in an extremely feeble condition and wholly dependent upon charity. I immediately communicated this discovery to Mr. Stephens and to defendant's counsel and arranged with the latter to take Mr. Latham's testimony on April 25th.

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On the morning of that day or a few days thereafter I called at Mr. Stephens' office before going up to attend to the taking of Mr. Latham's deposition and was handed by Mr. Stephens some newspaper clippings and copies of other papers which appeared to have been used as exhibits in the Latham-Casler-Armat-Interference and all of which I offered as exhibits in this cause.

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I make this statement for the purpose of showing that I assumed, as I had every reason to believe up to the 22nd day of April, 1911, that Mr. Latham and his two sons, Otway and Gray, were dead. The press copy book containing the correspondence to which I had referred is at the disposal of counsel for defendant.

Cross-examination by Mr. Eyre:

XQ1. I understand that the first step you took to look up the exhibits in the interference was to have Mr. Hutchinson look through the interference files

and reports and that upon receiving his report, the next step was your letter to Mr. Seymour. Is that correct?

A. No, I personally made the search in the Patent Office and then when I found nothing there, I got Hutchinson to go to the Court of Appeals record and he reported to me after his examination that Seymour had withdrawn the exhibits. I then wrote to Seymour.

XQ2. When did you write to Seymour?

A. I wrote to Seymour on April 6, 1911, as appears from a press copy of a letter signed by me bearing that date and reproduced on page 386 of the letter book.

XQ3. I call your attention to the statement you made on the record on April 7th of this case following XQ283 of Lauste deposition and ask you if you do not want to make a somewhat further explanation than you have made in view of the fact that you had not written to Mr. Seymour or apparently to anyone else in the matter before April 6th.

A. I find the letter from Mr. Hutchinson under date of April 6th, 1911, in which he informs me that the exhibits were returned to Mr. Seymour of Washington some time during the year 1901. This was in reply to a letter of mine dated April 4, 1911, to Hutchinson, asking him to make a search for the exhibits and on April 6, 1911, I wrote to Seymour a letter containing the following statement: "My best information is that the exhibits or at least some of them were sent to the Anthony & Scovill Company or the Anseco Company as it was afterwards called, who owned at that time the Latham application." My recollection is that this information about the return of the exhibits to the Anthony

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Parker W. Page.

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& Scovill Company and their destruction was obtained in a conversation I had with Mr. Phillips Abbott who happened to be in my office some time before the dates named. I know that for some time prior to this I had been looking for these exhibits and had some correspondence with Mr. Marvin about them and I got this information either from Marvin or Abbott, I do not recall which. I only know that I had been looking for the exhibits for a long time prior to making arrangements to getting the witnesses Lauste and Dickson from Europe to testify on behalf of the complainant, and that I had been unsuccessful in locating any of them. I did not know that the Anthony & Scovill or the Anesco Company was in existence or anything more about it than that it was some company that at one time owned the Latham patents.

Cross-examination closed.

Deposition closed.

Signature waived.

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Adjourned to Monday, July 31, 1911, at 11 A. M.

New York, August 18th, 1911.

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Met pursuant to agreement.

Counsel same as before.

Complainant's counsel now offers in evidence a copy of the bill of the Boston Gear Works, reproduced on page 344 of this record, and the same is now "Complainant's Exhibit, Bill of Boston Gear Works, January 7, 1895, B.B., Ex'r."

It is stipulated and agreed that the said copy may be used in evidence with the same force and effect as the original, had the latter been produced and duly proved.

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Complainant's counsel also offers in evidence a copy of the bill referred to in Q55 of the deposition of Woodville Latham herein, and the same is marked "Complainant's Exhibit, Eastman Kodak Company Bill of February 18, 1895, B.B., Ex'r."

It is stipulated and agreed that the said copy is a true copy of a bill sent by the Eastman Kodak Company to Woodville Latham on February 18, 1895, and that it may be used in evidence with the same force and effect as the original, had the latter been produced and duly proved.

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Complainant's counsel also offers in evidence a copy of a bill from the Eastman Kodak Company to Woodville Latham, dated April 5, 1895, and the same is marked "Complainant's Exhibit, Eastman Kodak Company Bill of April 5, 1895, B.B., Ex'r."

It is stipulated and agreed that the said copy is a true copy of the bill sent by the Eastman Kodak Company to Woodville Latham on April 5, 1895, and that it may be used in evidence with the same force and effect as the original, had the latter been produced and duly proved.

- 2032 Complainant's counsel also offers in evidence a copy of a bill from the Eastman Kodak Company to Woodville Latham, dated April 27, 1895, and the same is marked "Complainant's Exhibit, Eastman Kodak Company Bill of April 27, 1895, B.B., Ex'r." It is stipulated and agreed that the said copy is a true copy of a bill sent by the Eastman Kodak Company to Woodville Latham on April 27, 1895, and that it may be used in evidence with the same force and effect as the original, had the latter been produced and duly proved.
- 2033 The objection heretofore made to Complainant's Exhibits, "Latham Depositions in Armat Interference," offered in connection with Q7 of the deposition of Woodville Latham, in so far only as such objection was based upon and applies to the fact that uncertified copies of the said depositions were offered, is hereby withdrawn, and it is agreed between counsel, all other objections to said exhibits being understood to remain in force, that the said copies so offered on behalf of complainant may, subject to correction at any time hereafter should error appear, be used in lieu of duly certified copies, and with the same evidential force and effect.
- 2034 Complainant's counsel now offers in evidence for the purpose of showing the issues involved and determined in the interference Latham vs. Armat, hereinbefore referred to, a certified copy of the decision of the Court of Appeals for the District of Columbia in said interference and the same is marked "Complainant's Exhibit, Decision of Court of Appeals in Armat Interference. B.B., Ex'r."

Complainant rests.

Petition for Rehearing.

2035

IN THE

UNITED STATES DISTRICT COURT,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COMPANY,

Plaintiff,

vs.

UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, AND PRAGUE AMUSEMENT COMPANY, INC.,

Defendants.

In Equity, 2036
No. 12-194.

PETITION FOR REHEARING.

And now comes the plaintiff, Motion Picture Patents Company, by its counsel, and prays that a rehearing be granted in this cause for errors of law in the rulings of the Court at the trial, and alleges as specific ground therefor:

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FIRST.—That the Court erred, in matter of law, in holding, broadly, that where a patent-owner sells and delivers a machine embodying the invention covered by his patent, with a restriction as to its use, brought home to the purchaser at the time of the sale, such restriction is invalid and void and may be disregarded by the purchaser.

SECONDLY.—That the Court erred, in matter of law, in holding that when the plaintiff in this cause

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Petition for Rehearing.

licensed another to manufacture and sell a machine embodying the invention covered by the patent in suit, under the restriction, brought home to the purchaser at the time of sale, that the purchaser should have the right to use the machine only upon such terms as to royalty, etc., the plaintiff should impose, that such restriction is invalid and void, and that the purchaser, after the delivery of the machine to him, may use it without restriction and as he sees fit without being an infringer of the plaintiff's rights under its patent.

2039

THIRDLY.—That the Court erred, in matter of law, in holding that the *test* of the patent-owner's loss of all right to restrict, at the time of sale, the use of a specimen of the machine sold by him embodying the invention of the patent was his inability to recapture such machine by an action of replevin.

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Wherefore, your petitioner respectfully prays that a rehearing of the cause be granted and an opportunity be given to counsel for both sides to present oral arguments on the aforesaid points of law.

And your petitioner will ever pray, etc.

MOTION PICTURE PATENTS COMPANY,

By H. N. MARVIN,
President.

We hereby certify that in our opinion the foregoing petition is well founded in point of law and in point of fact, and is not presented for delay.

GEORGE F. SCULL,
MELVILLE CHURCH,
Counsel for Plaintiff.

STATEMENT OF FACTS.

I. The plaintiff, Motion Picture Patents Company as the owner of the Latham patent No. 707,034, dated August 26, 1902, for Improvements in Projecting Machines (being the patent in suit), on June 20, 1912, granted to The Precision Machine Company, a license "to manufacture and sell" "motion picture exhibiting or projecting machines"

"under the restriction and condition that such exhibiting or projecting machines shall be used
(1) solely for exhibiting or projecting motion pictures containing the inventions of reissued Letters Patent No. 12,192 leased by a licensee of the licensor while it owns said patents and
(2) upon other terms to be fixed by the licensor and complied with by the user while the said machine is in use and while the licensor owns said patents (which other terms shall only be the payment of a royalty or rental to the licensor while in use)."

II. The license also provided that:

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"The licensee further covenants and agrees that the licensee will attach in a conspicuous place to each and every such exhibiting or projecting machine of the licensee's manufacture, sold by the licensee, except for export, after the date hereof, a plate showing plainly not only the dates of the letters patent under which the said machine is licensed, but also the following words and figures:

2044

Petition for Rehearing.

	“Serial No. Patented	No.
--	-------------------------	-----

2045

The sale and purchase of this machine gives only the right to use it solely with moving pictures containing the invention of reissued patent No. 12,192 leased by a licensee of the Motion Picture Patents Company, the owner of the above patents and reissued patent, while it owns said patents, and upon other terms to be fixed by the Motion Picture Patents Company and complied by the user while it is in use and while the Motion Picture Patents Company owns said patents. The removal or defacement of this plate terminates the right to use this machine.”

III. The license further provided that the licensee should pay:

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“On each such machine capable of exhibiting or projecting by transmitted light, motion pictures on film of a width greater than approximately one inch (1 in.), a royalty of five dollars (\$5.00).”

IV. The machine (Defendant's Exhibit No. 3, Simplex Machine) whose use is charged by the plaintiff to have been an infringement of plaintiff's patent, in suit, was made and sold by The Precision Machine Company under its license aforesaid and bears a plate upon which is inscribed the restrictions under which the machine may be used, in the exact words of the said license, the matter on the plate reading, in full, as follows:

MFR'S SERIAL NO.	SPECIAL LICENSE NO.
3556	3667
Made by	SIMPLEX THE PRECISION MACHINE CO.

PATENTED.

No. 578,185, March 2, 1897, No. 580,749, April 13, 1897, No. 586,953, July 20, 1897, No. 673,-
329, April 30, 1901, No. 673,992, May 14, 1901,
No. 707,934, Aug. 26, 1902, No. 722,382, March
10, 1903.

2048

The sale and purchase of this machine gives only the right to use it solely with moving pictures containing the invention of reissued patent No. 12,192, leased by a licensee of the Motion Picture Patents Company, the owner of the above patents and reissued patent, while it owns said patents and upon other terms to be fixed by the Motion Picture Patents Company, and complied with by the user while it is in use and while the Motion Picture Patents Company owns said patents. The removal or defacement of this plate terminates the right to use this machine.

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MOTION PICTURE PATENTS CO.,
New York, N. Y., U. S. A.

V. The said machine (Defendant's Exhibit No. 3, Simplex Machine), was purchased by defendant, Prague Amusement Company, with the said plate upon it bearing the dates and numbers of the patents under which it was licensed and the notice

2050

Petition for Rehearing.

of the restrictions under which the machine might be used.

VI. The defendant, Prague Amusement Company, in utter disregard of the said restrictions as to use, proceeded to use the said machine (1) in connection with motion pictures furnished by the defendants, Universal Film Mfg. Co., and Universal Film Exchange of New York, *neither of which concerns was or is a licensee of Motion Picture Patents Company*,* and (2) without compliance with the "other terms to be fixed by Motion Picture Patents Company," to-wit, "the payment of a royalty or rental to the licensor while in use," as provided in the license under which the machine was sold.

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VII. Upon this state of facts, the Court, at the trial, ruled that the defendant, Prague Amusement Company, by its purchase of the machine put out by The Precision Machine Company, under the authority and license of the plaintiff as the owner of the patent, acquired the absolute right of property in and the legal possession to the machine and that all the restrictions as to the use of the machine attempted to be imposed by the plaintiff were invalid, void and of none effect; and, furthermore, that the test of the relinquishment, in point of law, of the plaintiff's dominion over the machine as patent-owner, was to be found in the fact that neither the plaintiff nor The Precision Machine

*NOTE.—We have *not* herein discussed the legality of the provision of the license restricting the use of the machine to a use in connection with motion pictures supplied by a licensee of the Patents Company, although such restriction is, we submit, valid under *Henry vs. Dick*, 224 U. S., 1; *Bement vs. National Harrow Co.*, 186 U. S., 89, 95, and *Heaton Pen. B. F. Co. vs. Eureka Specialty Co.*, 77 Fed., 288.

Company, could, in the circumstances of the sale, recover back lawful possession of the machine by the action of replevin.

ARGUMENT.

I. The rulings of the Court, were, we respectfully submit, based upon the mistaken conception that the sale, by the owner of a patent of a specimen of the patented machine and the delivery of such machine into the possession of the purchaser necessarily transfers to the purchaser all of the patent-owner's rights not only in the property and possession of the machine itself but also all his rights in his patent, so far as that particular machine is concerned.

The error of the Court is based upon the assumption that the patent-owner's property rights in his patent and his property rights in a physical embodiment of the patented invention are identical, when, the fact is, they are quite distinct and separable and are constantly so treated by the law.

II. According to Blackstone, all property may 2055 be classed, largely, as hereditaments.

"Hereditaments then, to use the largest expression, are of two kinds, corporeal and incorporeal. Corporeal consist of such as affect the senses; such as may be seen and handled by the body; incorporeal are not the object of sensation, can neither be seen nor handled, are creatures of the mind, and exist only in contemplation."

* * * * *

Turning to more modern definitions, we find that:

2056

Petition for Rehearing.

"Property is again divided into corporeal and incorporeal. The former comprehends such property as is perceptible to the senses, as lands, houses, goods, merchandise and the like."

3 *Bouvier's Law Dictionary*, 2752;
Rawle 3d Rev. (1914).

Again,—

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"Incorporeal Chattels. . The incorporeal rights or interests growing out of personal property, such as copyrights and patent rights, stocks and personal annuities."

Ibid, Vol. 2, page 1528.

III. That the rights conferred by a patent are incorporeal rights has been judicially determined by the Supreme Court of the United States:

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"The privileges granted by letters patent are plainly an instance of an incorporeal kind of personal property which as personally, in the absence of context to the contrary, would go to the executor or administrator in trust for the next of kin."

De la Vergne Machine Co. vs. Feathers-
stone, 147 U. S., 209-222,—Fuller, C.
J.

IV. In every sale made by the owner of a patent, or by one under his authority, of a machine embodying the patented invention, two distinct kinds of property are involved, that is to say, (1) cor-

poreal property or the physical machine itself, which is tangible and may be seen and handled; and (2) incorporeal property, or the owner's exclusive rights under the patent covering the machine, to-wit, the exclusive rights to make, to use and to sell the patented invention, which are intangible and may neither be seen or handled.

V. If a patent owner sells and delivers a specimen of the patented thing, as, for instance, a machine embodying the invention of the patent, without restriction as to use, the purchaser acquires, under such sale, the property and possession of the corporeal thing, the machine itself, and also, *by implication*, so much of the patent-owner's incorporeal right, *i. e.*, the exclusive right of user, as will enable the purchaser to enjoy to the full the use of the corporeal thing purchased.

The law will imply no restriction as to use of the corporeal thing if the patent owner affirmatively imposes none.

VI. If, on the other hand, the patent owner sells a specimen of the corporeal patented thing, *i. e.*, the machine embodying the invention of the patent, and, at the time of the sale, imposes, affirmatively, a positive restriction as to the use of the machine by the purchaser; or in other words, if the patent-owner restricts the use of his incorporeal property, *i. e.*, the exclusive right of use secured to him by the patent—the purchaser, although he may properly be said to have the right of possession as well as the right of property in the machine itself—the corporeal thing—as such, acquires only so much of the patent-owner's incorporeal right—the exclusive right to use—as the

2062

Petition for Rehearing.

patent-owner is pleased to grant him. In other words the purchaser acquires, not the unqualified use of the physical corporeal thing purchased, but only the restricted, qualified right of use of the same that the patent-owner has seen fit to part with.

VII. It is no test that the purchaser, in the case last supposed, has acquired the unrestricted, unqualified right to the patent-owner's exclusive incorporeal right of user under the patent, that the patent-owner may not, by the writ of replevin, recapture and take again into his possession the physical machine sold to the purchaser, for the writ of replevin is only available to recover possession of corporeal, physical property, such as can be seized and handled by the sheriff, and is never available to secure the possession of intangible, incorporeal property, such as the "privileges" granted by letters patent," upon which the sheriff can not possibly lay his hands. (147 U. S., 209-222.)

2064 VIII. The right of property in and the right of possession to a corporeal specimen of the patented machine may well be in the purchaser of a patented machine sold with a restriction as to use, while the remainder of the patent-owner's exclusive incorporeal right of use may be retained by the patent-owner himself.

For instance, if the patent owner sells a machine for use only in a particular territory, or for a particular purpose, any use outside of the particular territory, or for a different purpose, will be an infringement of the patent-owner's retained right of use in all other places or for all other purposes.

In neither of the cases put, where the sale was accompanied by a limitation as to the place of use, or as to the purpose of use, would the patent-owner be able to lawfully obtain possession of the machine sold, by writ of replevin, because, in each case, the purchaser would be in lawful possession of the corporeal machine, and have a perfect right of property therein and the right to use the same, despite the patent-owner, so long as the purchaser's use were confined to the territory prescribed, or to the purpose prescribed, by the patent-owner at the time of the sale*

*The existence of the patent-owners incorporeal exclusive rights to make, use and sell as things separate and distinct from any physical embodiment of the patented invention is recognized by the law in a variety of ways, as for instance,

(a) By the Statute itself, which provides:

"Sec. 4898. Every patent or any interest therein shall be assignable in law by an instrument in writing, and the patentee or his assigns or legal representative may in like manner grant and convey an exclusive right under his patent to the whole or any specified part of the United States. ***"

(b) By the fact that it has been held that the patent-owner may lawfully grant:

- (1) The non-exclusive right to make, use and sell to a limitless number of individuals.
- (2) The right to make, use and sell at a specified place only.
- (3) The right to make and use, but not to sell.
- (4) The right to make and use for a specific purpose only, but not to sell.
- (5) The right to make and use at a specified place only, but not to sell.
- (6) The right to use only, but not to make or sell.
- (7) The right to use only at a specified place, but not to make or sell.
- (8) The right to use only for a specified purpose, but not to make or sell.
- (9) The right to use only for a specified purpose at a specified place, but not to make or sell.
- (10) The right to make, or to use, or to sell for a limited or specified time only.

In all of the above instances, where the right to make, or the right to use, or the right to sell is limited and circumscribed by the patent-owner, a making, or using, or selling, other than in the restricted and authorized way, is an infringement of the reserved incorporeal property right of the patent-owner, and

IX. Again, the idea that a right of property in a machine embodying the invention covered by a patent, necessarily carries the right to use that machine, despite the patent-owner's exclusive incorporeal right of user conferred by the patent, is exploded when we contemplate what happens when a machine built without license and in infringement of the patent is found in the hands of a purchaser who is using the same, or, again, when we contemplate what happens when a machine in the hands of a purchaser who has the right to use it only at a specified place, but not to make or sell, is sold on execution by the sheriff in satisfaction of a judgment for debt. In these cases the title to the specific, physical corporeal machine is transferred to the purchaser, but he can not use it without infringement of the patentee's incorporeal rights. He may break up the machine and sell it for junk and pocket the proceeds, but, if he uses the machine, he is a tortfeasor, violates the patent-owner's rights, and may be enjoined and made to pay damages.

X. In his efforts to realize a profit from the exclusive privileges conferred by the patent, a patent-owner may

- (1) Make specimens of the patented machine and sell them outright, for a lump sum; or

this reservation of right is not at all inconsistent with the right of property and the right of possession of the grantee, licensee or purchaser in and to the corporeal physical embodiments of the patented thing which he is authorized to have and to use in the authorized way, nor is it inconsistent with the patent-owner's lack of right to recapture from the grantee, licensee or purchaser, the said physical embodiments of the patented thing by the writ of replevin, because of his lack of right to the possession of such embodiments.

(2) He may make and sell machines and take payment for the same by way of royalty of so much per week, month or year.

If he himself does not manufacture and sell, he may authorize another to make and sell either (1) upon payment of a lump sum down; or (2) by way of royalty of so much per machine for the privilege; or he may authorize another to make and sell upon payment of a royalty of so much per machine, coupled with a restriction imposed upon every purchaser from him, that he use the machine only upon payment of a royalty to the patent-owner for the right to use.

In the case at bar, the Patents Company, as owner of the patents, has chosen to derive its compensation for the use of its patents wholly by way of royalties. Under its licensing system, it receives, from the licensed *manufacturers* of machines, a royalty of \$5 per machine made and sold, and from the *exhibitors* or *users* of such machines a further royalty of 50 cents per week per machine, for the use of the machines.

If it itself made and sold the machines it might, in accordance with settled practice, take its remuneration by way of a weekly royalty for use. Why may it not do the same thing where it licenses another to manufacture and sell for it and prescribes that the purchaser from the licensee may only use the machines under the same terms of royalty?*

*Leaving out of consideration the limitation as to the use of the machine with a particularly described film it will be noted that the plate on the machine distinctly states that the machine is only licensed for use *while* other terms fixed by the Patents Company are complied with. In other words, the license to use conveyed to the purchaser on the purchase of the machine is concurrent with the payment of a royalty of 50 cents per week. When no royalty is paid no right to use exists.

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Petition for Rehearing.

XI. It is not, and can not be, denied that the purchaser from the licensed manufacturer obtains full title to the corporeal property in the machine purchased by him, nor that such machine can not be recaptured by the owner by the writ of replevin.

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The machine is indubitably the property of the purchaser and the latter can not be deprived of the enjoyment of it, so long as it is used in the manner and under the restrictions prescribed, but when it is used in disregard of such restrictions and in a manner not authorized, its use becomes an infringing use and can be restrained.

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XII. It will thus be seen that while the plaintiff's system of selling with a restricted right of user, puts the legal title to the property in the corporeal, tangible thing sold, in the purchaser, and thereby prevents the recapture of that property by an action of replevin, it does not cause the plaintiff to part with all, but only with a part of the incorporeal right of exclusive use guaranteed by its patent; and that where the limited right of user is departed from by the purchaser, the latter, being without any right of use at all, save such as is expressly granted him, becomes as much of an infringer in respect of a use not permitted as if he had been accorded no right of use at all.

XIII. It is respectfully submitted that this failure to keep in mind the distinction between the corporeal property of the purchaser in the machine itself and the separate, incorporeal right of the patent-owner in the *use* of the machine has lead the Court into the error of law complained of.

Counsel for plaintiff has been unable to find that this distinction between the corporeal and incorporeal rights involved in a sale of a patented article has ever before been presented to this Court and they therefore crave permission to present argument on the point at an oral hearing.

GEO F. SCULL,
MELVILLE CHURCH,
Counsel for Plaintiff.

December 29, 1915.

2078

Opinion.

DISTRICT COURT OF THE UNITED STATES,
SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-
PANY

vs.

UNIVERSAL FILM MANUFACTUR-
ING COMPANY, UNIVERSAL FILM
EXCHANGE and PRAGUE AMUSE-
MENT COMPANY.

2079

Final hearing in Equity; action on Patent
707934.

GEORGE F. SCULL and MELVILLE CHURCH, Esqs., for
Plaintiff;
OSCAR W. JEFFERY and EDMUND WETMORE, Esqs.,
for Defendants.

2080

Opinion.

MEMORANDUM.

This decision is filed because the discussion at bar has not been preserved by the stenographer, and it seems advisable to put on file my reasons for decision in order that the decree may not be misleading.

The following facts appeared: Plaintiff is the owner by assignment, not only of the patent in suit, but of many other patents relating to what is commonly called the Moving Picture art.

2081

It entered into an agreement with the Precision Machine Company by which it gave the Machine Company "subject to the covenants, conditions and stipulations hereinafter expressed, the right and license * * * to manufacture and sell picture exhibiting or projecting machines embodying" the invention described in the patent in suit and many other patents. One of the covenants assumed by the Precision Company in respect of machines so sold was that it would "pay royalties as follows," viz.: \$5 on each machine of one type, and 3% of the "net retail selling price" on machines of other types.

2082

Under the contract this was the only royalty or remuneration collectible by the plaintiff herein from the Precision Company.

The latter company, however, further covenanted that every machine (of the type here presented) made by it "in the United States" should be "sold * * * under the restriction and condition that such * * * machine shall be used solely for exhibiting or projecting motion pictures containing the inventions of re-issued Letters Patent No. 12192, leased by a licensee of the (plaintiff herein) while it owns (the patent in suit), and upon other terms to be fixed by (the plaintiff herein) and com-

plied with by the user while the said machine is in use and while the (plaintiff owns the patent in suit),—which other terms shall only be the payment of a royalty or rental to the (plaintiff herein) while in use."

The Precision Company further agreed to attach on each machine so manufactured and sold, a plate showing the Letters Patent under which the said machine was licensed (including the patent in suit), and also the following legend:

"The sale and purchase of this machine gives only the right to use it solely with moving pictures containing the invention of Reissued Patent No. 12,192, leased by a licensee of the Motion Picture Patents Company, the owner of the above patents and reissued patent, while it owns said patents, and upon other terms to be fixed by the Motion Picture Patents Company and complied with by the user while it is in use and while the Motion Picture Patents Company owns said patents. The removal or defacement of this plate terminates the right to use this machine."

Subsequent to the execution of this agreement Reissued Letters Patent 12,192 expired and the invention thereby covered became public property.

Subsequent to such expiration of said patent the defendant Universal Film Manufacturing Company made a reel of film which embodied the invention of said expired reissued Letters Patent. That film it sold to the defendant the Universal Film Exchange, which in turn furnished it for use to the defendant the Prague Amusement Company.

Also subsequent to the expiration of said re-

issued Letters Patent the 72nd Street Amusement Company was lawfully in possession of a machine suitable for exhibiting picture film made and sold by the Precision Machine Company embodying the invention of the patent in suit and bearing upon it a plate with the inscription hereinabove set forth.

The 72d Street Amusement Company had as between itself and the Precision Company bought and paid for said machine, and its possession and use thereof were, so far as the Court is informed, lawful and uncomplained of. On November 2d, 1914, the defendant Prague Amusement Company leased from the 72d Street Amusement Company certain property including said machine, and thereafter used said machine for the exhibition of the picture film hereinabove referred to as made by one defendant, sold to the second and leased to the third.

This act, viz.: the exhibition of said film through, with or by means of said machine, is the act of infringement complained of.

Being of opinion that the limitation on the use of a patented article sold in the manner above set forth is invalid, I have directed a decree to be entered dismissing the bill on that ground alone.

Briefly stated, my reasons for this opinion are that there is no distinction, logical or intelligible, to be drawn between a limitation upon the re-sale of a patented article and a limitation upon the use of a patented article contained in a condition subsequent to the contract of sale.

Referring to the decisions, it was my opinion that *Bauer vs. O'Donnell* is so inconsistent with *Dick vs. Henry* that the latter case can no longer be considered as stating the law. This belief I had intimated already in *Great Atlantic & C. Co. vs. Cream of Wheat Co.*, 224 Fed. Rep., at page 559.

The foregoing is a summary of what occurred at bar.

Subsequent to decision rendered, defendants offered a final decree for signature, and plaintiff moved for a re-argument.

The substance of the error said to have been committed is a failure to distinguish between the property in a corporeal thing, eg. a patented machine, and that incorporeal hereditament which is the use of the aforesaid corporeal substance, or the machine.

That error (in the sense of belonging to the minority) may have been committed herein is quite likely, but the point has not been overlooked.

It remains my opinion:

(1) That such attempted severance between corporeal and incorporeal property cannot be lawfully maintained under the patent laws,—nor asserted in an action on the patent,—whatever may be the ultimate limit of permitted contractual arrangements; and also

(2) That the attempted reservation or severance here shown is specifically bad in that it attempts not only to confine the use of a machine once sold and delivered to a particular kind of film, but further seeks to render that use subject to any and every restriction or regulation which the patent owner may from time to time choose to make or vary.

The re-argument is denied and decree signed.

Dec. 31, 1915.

C. M. HOUGH,
U. S. D. J.

2092

Decree.

At a Stated Term of the United States District Court for the Southern District of New York, held at the Court Rooms thereof in the Borough of Manhattan, City of New York, on the 31st day of December, 1915.

Present—Hon. CHARLES M. HOUGH,
District Judge.

2093

MOTION PICTURE PATENTS COMPANY,	Plaintiff,
vs.	
UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE and PRAGUE AMUSEMENT COMPANY,	Defendants.

2094 This cause came on to be heard at this Term and the parties hereto presented their evidence; and thereupon it appearing after argument by counsel that no infringement on the part of any defendant of the patent in suit herein had been shown, it was

ORDERED, ADJUDGED AND DECREED that the bill of complaint in the above entitled cause be, and the same hereby is dismissed, with costs to the defendants.

CHAS. M. HOUGH,
U. S. D. J.

**Petition for Appeal and Order 2095
Thereon.**

IN THE DISTRICT COURT OF THE UNITED
STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-
PANY,

Complainant,

vs.

UNIVERSAL FILM MANUFACTUR-
ING COMPANY, UNIVERSAL FILM
EXCHANGE OF NEW YORK, and
PRAGUE AMUSEMENT COM-
PANY,

Defendants.

In Equity 2096
No. 12-194
On Patent
No. 707,934.

Motion Picture Patents Company, the complainant hereinabove named, considering itself aggrieved by the decree made and entered herein on the 31st day of December, 1915, hereby appeals from said decree to the United States Circuit Court of Appeals for the Second Circuit for the reasons specified in the Assignment of Errors filed herewith, and it prays that this appeal may be allowed, and that a transcript of the record, proceedings and papers upon which said decree was made, duly authenticated, may be sent to the United States Circuit Court of Appeals for the Second Circuit.

2097

Dated, New York, January 4th, 1916.

GEORGE F. SCULL,
Solicitor for Complainant-Appellant.

2098

Assignment of Errors.

A proper bond in the sum of Two hundred and fifty Dollars (\$250) as security for costs on appeal having been given by complainant-appellant, it is this day

ORDERED that the application be and the same hereby is allowed.

Dated, New York, January 6th, 1916.

2099

J. M. MAYER,
U. S. Dist. Judge.

Assignment of Errors.

IN THE DISTRICT COURT OF THE UNITED STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

2100

MOTION PICTURE PATENTS COMPANY,

Complainant,

vs.

UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, and
PRAGUE AMUSEMENT COMPANY,

Defendants.

In Equity
No. 12-194.
On Latham
Patent No.
707,934.

Now comes the above named complainant, Motion Picture Patents Company, by its solicitor and

presents, with the accompanying petition of appeal from the decree entered in this cause, the following assignment of errors:

1. That the Court erred in holding that no infringement on the part of any defendants of the patent in suit had been shown.

2. That the Court erred in dismissing the complainant's bill of complaint.

3. That the Court erred in awarding costs to the defendants. 2102

4. That the Court erred in holding that where the sale of a patented machine authorized by the patent owner is coupled with a restriction as to its use, such restriction is illegal and of no effect.

5. That the Court erred in holding that, on the sale, by, or with the authority of, a patent owner, of a machine embodying the invention of the patent, the corporeal property in the machine and the incorporeal property of the patent owner in the exclusive rights to make, use and sell conferred by the patent, necessarily pass to the purchaser of the machine. 2103

6. That the Court erred in holding that the restrictions as to use imposed by the complainant in this case on the sale of the machines authorized by the complainant to be sold were and are illegal and void.

WHEREFORE said complainant prays that the decree aforesaid may be reversed, and that a decree be directed to be entered in accordance with

the prayers of the bill of complaint with costs to complainant, and vacating and setting aside the decree of December 31, 1915.

Dated, New York, January 4th, 1916.

GEORGE F. SCULL,
Solicitor for Complainant-Appellant.

Citation.

IN THE DISTRICT COURT OF THE UNITED
2105 STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

<p>MOTION PICTURE PATENTS COMPANY, Complainant, vs. UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, and 2106 PRAGUE AMUSEMENT COMPANY, Defendants.</p>	<p>In Equity No. 12-194. On Latham Patent No. 707,934.</p>
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United States of America, ss.:

Universal Film Manufacturing Company, Universal Film Exchange of New York, and Prague Amusement Company,

GREETING:

You are hereby cited and admonished to be and appear at a session of the United States Circuit

Court of Appeals for the Second Circuit to be holden in the Borough of Manhattan, New York City, New York, on the 4th day of February, 1916, pursuant to an appeal filed in the Clerk's office in the United States District Court for the Southern District of New York, wherein Motion Picture Patents Company is the appellant and you are the appellees, to show cause, if any there be, why said District Court for the Southern District of New York should not be directed to vacate the decree rendered against said appellant, and enter a decree in accordance with the prayers of the bill of complaint with costs to complainant.

2108

WITNESS the Honorable Charles M. Hough, United States District Judge, Southern District of New York, this 6th day of January, in the year of our Lord, one thousand nine hundred and sixteen and the independence of the United States of America, the one hundred and fortieth.

J. M. MAYER,
U. S. Judge.

2109

Service of this citation is hereby admitted this 7th day of January, 1916.

WETMORE & JENNER,
Solicitors for Defendants.

2110

Order.

At a stated term of the United States District Court for the Southern District of New York, held in the Post Office Building, Borough of Manhattan, City and State of New York, this 8th day of January, 1916.

Present—Hon. JULIUS M. MAYER, District Judge.

2111

MOTION PICTURE PATENTS COMPANY,
Complainant,

vs.

UNIVERSAL FILM MANUFACTURING COMPANY, UNIVERSAL FILM EXCHANGE OF NEW YORK, and PRAGUE AMUSEMENT COMPANY.
Defendants.

In Equity
No. 12—194.

2112

An appeal having been allowed in the above entitled case, it is, on the annexed consents and on motion of solicitor for complainant-appellant,

ORDERED that the provisions of Equity Rule 75 be, and the same hereby are, waived, and that the testimony of both parties may be printed in the form of question and answer in the Transcript on Appeal; and it is

FURTHER ORDERED that the Clerk of this Court shall certify as such Record and Transcript, all the following and no others, to wit:

The pleadings, proofs, testimony and exhibits of both parties as submitted to the Court:

Petition for Rehearing;
 Opinion of Judge Hough on final hearing;
 Final decree of December 31, 1915;
 Petition of Appeal and allowance thereof;
 Assignment of Errors;
 Citation;
 This Order;
 Praecept;
 Certificate of the Clerk; 2114

and it is

FURTHER ORDERED that the following paper exhibits need not be printed in the Transcript of Record, but may be treated as physical exhibits and produced at the argument of the appeal herein:

1. Certificate attached to Complainant's Exhibit No. D;

2. Original text of French patent to Marey, 208,-
 617 of 1890, Defendants' Exhibit No. 15; 2115

3. Original text of French patent to Marey, 231,-
 209 of 1893, Defendants' Exhibit No. 18;

4. Original text of French patent to Joly, 249,-
 875 of 1896, Defendants' Exhibit No. 27;

5. Receipt Book of American Kinetoscope Company, Defendants' Exhibit No. 42;

6. Certificate of Commissioner of Patents on Defendants' Exhibit No. 45;

2116

Order.

7. Certificate of Commissioner of Patents on Defendants' Exhibit No. 46;

8. Certificate of Commissioner of Patents on Defendants' Exhibit No. 47.

J. M. MAYER,
U. S. Judge.

We hereby consent to the entry of the foregoing order.

2117

Dated January 8, 1916.

GEORGE F. SCULL,
Solicitor for Complainant-Appellant.

WETMORE & JENNER,
Solicitors for Defendants-Appellees.

2118

IN THE DISTRICT COURT OF THE
UNITED STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-

PANY,

Complainant-Appellant,

vs.

UNIVERSAL FILM MANUFACTURING
COMPANY, UNIVERSAL FILM
EXCHANGE OF NEW YORK, and
PRAGUE AMUSEMENT COMPANY,
Defendants-Appellees.

In Equity 2120
No. 12—194.

TO THE CLERK OF THE DISTRICT COURT OF THE
UNITED STATES FOR THE SOUTHERN DISTRICT
OF NEW YORK:

You are hereby requested to certify the Transcript of Record to be filed in the United States Circuit Court of Appeals for the Second Circuit, pursuant to an appeal allowed in the above entitled case on or about January 6th, 1916, and to include in said Transcript the following, and no others:

The pleadings, proofs, testimony and exhibits of both parties as submitted to the Court:

Petition for Rehearing;

Opinion of Judge Hough on final hearing;

Final decree of December 31, 1915;

2122

Praeclipe.

Petition of Appeal and allowance thereof;
Assignment of Errors;
Citation;
Order of January 8th, 1916;
This Praeclipe.

We hereby acknowledge service of a copy of the foregoing Praeclipe this 11th day of January, 1916, and agree that the same embraces all of the papers and documents which defendants-appellees desire incorporated in the Transcript on Appeal.

2123

GEORGE F. SCULL,
Solicitor for Complainant-Appellant.

WETMORE & JENNER,
Solicitors for Defendants-Appellees.

2124

Stipulation.

2125

IN THE DISTRICT COURT OF THE
UNITED STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-
PANY,
Complainant-Appellant,

vs.

UNIVERSAL FILM MANUFACTURING
COMPANY, UNIVERSAL FILM
EXCHANGE OF NEW YORK, and
PRAGUE AMUSEMENT COMPANY.
Defendants-Appellees.

In Equity 2126
No. 12—194.

It is hereby stipulated by and between counsel
for the respective parties in the above entitled suit
that the foregoing printed copy ^{of Vol. 1} is a true transcript
of the record as agreed on by the parties to the
above cause and may be certified by the clerk as
the transcript of record.

2127

Dated New York, N. Y., January 19th, 1916.

GEORGE F. SCULL,
Solicitor for Complainant-Appellant.

WETMORE & JENNER,
Solicitors for Defendants-Appellees.

2128

Certificate of the Clerk.

IN THE DISTRICT COURT OF THE
UNITED STATES,

FOR THE SOUTHERN DISTRICT OF NEW YORK.

MOTION PICTURE PATENTS COM-
PANY,
Complainant-Appellant,

vs.

2129

UNIVERSAL FILM MANUFACTURING
COMPANY, UNIVERSAL FILM
EXCHANGE OF NEW YORK, and
PRAGUE AMUSEMENT COMPANY,
Defendants-Appellees.

In Equity
No. 12—194.

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I, Alexander Gilchrist, Jr., Clerk of the District Court of the United States of America for the Southern District of New York, do hereby certify that the foregoing ^{copy} is a correct transcript of the record of the said District Court in the above entitled matter, as agreed on by the parties.

IN TESTIMONY WHEREOF, I have caused the seal of the said Court to be hereunto affixed, at the City of New York, in the Southern District of New York, this ~~19~~¹⁹ day of January, in the year of our Lord one thousand nine hundred and sixteen, and of the Independence of the United States the one hundred and fortieth.

ALEXANDER GILCHRIST, JR.,
Clerk.

